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OF

CLINICAL MEDICINE

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VOLUME XXV, 1918

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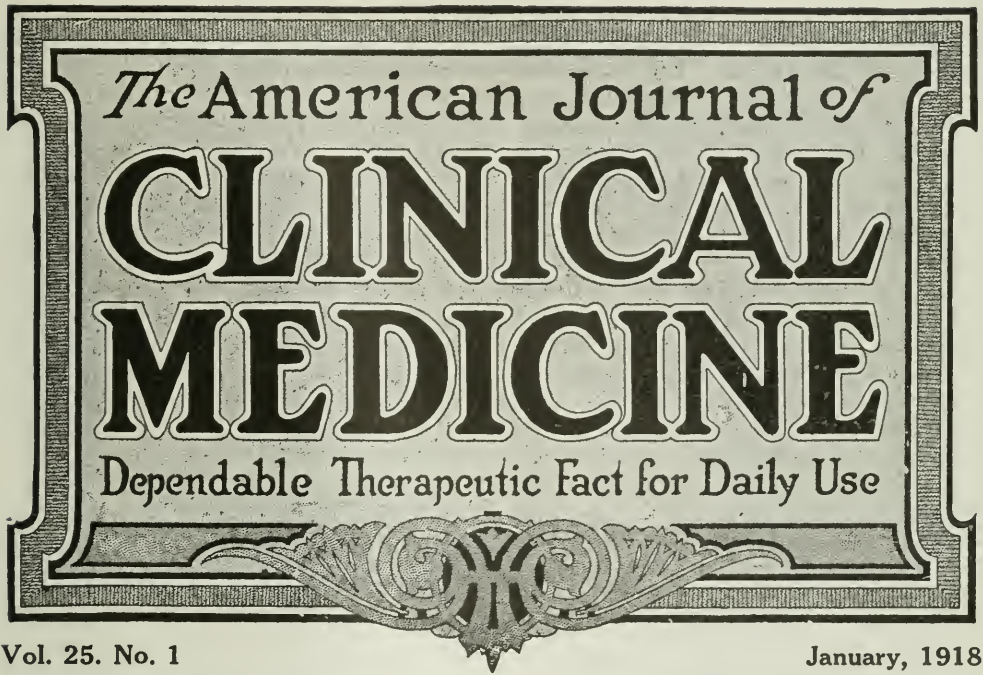
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A



DR. WILLIAM F. WAUGH

Whose indomitable optimism and never-failing helpfulness, breathed into the editorial pages of CLINICAL MEDICINE, have been an inspiration to its readers for more than twenty years. See editorial, page 2.



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The Twenty-fifth Year of Our Work

THIS is our birthday. Twenty-five years ago this month, THE ALKALOIDAL CLINIC made its initial appearance. No earthquake occurred, in fact, we do not now recollect that any decided convulsion of nature heralded the advent of the new luminary. THE CLINIC was a modest, inconspicuous pamphlet of 16 pages, including reading matter, advertisements, and cover. There were certain distinguishing features about it, though, that separated it from the generality of medical periodicals. One of these was its abounding optimism—yet, not altogether this either, for, there was a definite reason for faith in the ability of the doctor to intervene effectively in behalf of his patient by means of remedies of definite composition and possessing positive action.

Doctor Abbott realized the worthlessness of the old materia medica, and he correctly defined the reasons therefor. He saw that these reasons might be summed up in one word, Uncertainty. Uncertainty as to the true point against which our attack should be directed, uncertainty as to

the nature and powers of the weapons in our hands. Take as an instance the treatment of typhoid fever employed in the Massachusetts General Hospital twenty years ago as described by Doctor Drake. It is hard to believe now that this was at the hands of a distinguished member of the faculty of Harvard Medical School. The point selected for therapeutic attack was the fever, the weapon chosen was acetanilid, in doses of from 40 to 60 grains. The crudity of both conceptions seems now to point to a period far antedating the present.

Two basic principles that formed the foundation of THE CLINIC's work were: the use of the definite, uniformly acting alkaloids, and the doctrine of fecal auto-toxemia as a factor in the vast majority of diseases. To these, we have steadily adhered for this quarter century and have seen the profession gradually approximate to our position, in regard to the latter, at least. They haven't quite gotten around to the active principles, having stopped on the way to cast drug-

therapeutics over the ship's rail, à la Jonah's experience.

We never did advocate the active principles as an exclusive system—because we never believed in them as the exclusive repository of remedial virtues. When the development of organic therapeutics attained form and substance, we saw its importance and promptly admitted it to our advocacy.

Soon it became evident that the term under which the journal had been launched was no longer descriptive of it, or of that for which it stood. Not only had there been a tremendous advance in other lines of therapeutics, but, in pathology and diagnosis, the whole field of applied medicine had changed. It was, therefore, decided that the appropriate title of our journal should be that by which it is now known.

It will be seen that from first to last we have never altered our principles or our aims. We never accepted the role of advocating an exclusive system, despite the efforts of our adversaries to force us into that indefensible position. Today, we believe in the active principles as fervently as we ever did, but, we realize that there are other curative principles. We still advocate the alkaloids and the other principles whenever they are our best weapons; however, we never hesitate to say so when we believe that something else is preferable.

Some progress has been made. The Pharmacopeia admits a few more active principles at each revision. The scanty records published of drug-therapeutics show an increasing reliance on these powerful agencies. Nevertheless, while more and more of our colleagues are taking them up and studying the methods founded upon them, too many as yet fail to realize the vast advantages offered and the revolution they effect in drug application. Compared with the crude and perilous method employed twenty years ago at Harvard, our treatment of infectious fevers is at once simple, safe, effective, and the only one that is in harmony with the present views upon the pathology of these diseases.

THE AMERICAN JOURNAL OF CLINICAL MEDICINE has been phenomenally successful, in that but one other medical monthly in the world rivals it in the number of its subscribers. This is, because we have pub-

lished the journal for and by its readers. We have sedulously avoided the articles whose only lesson taught was that of dependence on the writers of the same, and have sought to aid our readers in treating their patients themselves. No preference has ever been shown by us for our own pet ideas—every reader has had as free access to our pages as the editors themselves. A well-chosen and constantly growing library enables us to supplement our own stock of knowledge and to supply our readers material that no ordinary practitioner could have access to, unless he were located in one of the greater cities. The amount of research that is put by our staff upon matters that often take up but a few lines in the journal would scarcely be believed by non-initiates.

From time to time relentless death has reached out and taken one of our co-workers. Scarcely any of those who enlivened the pages of the early *CLINICS* yet remains. Still, the constructive character of this movement is well shown by the rise of new men to carry it along.

The future of the journal depends on *you*, Doctor. It is *your* journal. It will be what *you* make it. No periodical can possibly continue to exist when it merely presents the individuality of one man. Matters that interest the readers are vital; those that interest the editors and publishers are not necessarily so. If you feel that CLINICAL MEDICINE needs more vim, *you* are the man to put in that vim. Go to it!

Enthusiasm is the element of success in everything. It is the light that leads and the strength that lifts men on and up in the great struggles of scientific pursuits and of professional labor. It robs endurance of difficulty, and makes a pleasure of duty.

—Bishop Doane.

DOCTOR WAUGH

Doctor Waugh, whose kindly face graces the frontispiece of this number of CLINICAL MEDICINE, certainly needs no introduction. For many years he has been talking to you, as man to man, through the editorial pages of this journal. He has a way of saying things that brings him close to his readers. His stuff is not impersonal and remote; it's personal and intimate—intensely human. When you read it you feel that you are talking to an old and dear friend—a man who knows you, under-

stands your problems, is interested in you, wants to help you, and knows how. And for this reason—and other reasons—I think he is the best medical editorial writer in America. And I am not the only one who thinks so.

For a number of years Doctor Waugh has been spending his summers in Muskegon, Michigan, and his winters in the South—of late, in Texas. This winter he has lingered in the North, partly because of ill health making it desirable to stay for a time close to his friends of the profession. I know he will be glad to hear from you; but I warn you not to expect him to answer every letter. He can't do it.

. . . Stand
Firm for your country, and become a man
Honour'd and lov'd: It were a noble life,
To be found dead, embracing her.

—Johnson.

"BREATHES THERE THE MAN"

I am asked to write a "rousing patriotic editorial—something that will stir the hearts of our readers and rouse them to the importance of doing their full patriotic duty." And this I wish to do. But, if the stirring events that are happening around us every day, almost every hour, do not arouse patriotic enthusiasm to a red-hot pitch, how can I hope to do it with any words of mine, which, even though they be as vivid as I want them to be, are still mere feeble shadows of the occasion itself?

It seems to me that the question is not, How can Americans be fired with patriotic passion, but, How can they escape it? If ever there was a war that made compelling appeal to every height and depth and length and breadth of American idealism, that searched out every nook and cranny of a man's manhood, physical, mental and moral, and tried it as by fire, surely this is the war! How any man, let alone any American, can hang back under such a call to his soul without blushing to himself in the dark, is more than I can fathom.

Take the fight itself. Can it be possible that anyone is still asking, What are we fighting for? Change the question a little; leave out the "for," and ask, rather, What are we fighting? The President answered it in his last ringing denunciation—*The Thing*. The accursed, diabolical, unspeakable Thing, that holds nothing, *nothing*, sacred—not the virtue of women, nor the

honor of men, nor the helplessness of little children, nor beauty, nor decency, nor common right—but, drives ruthlessly over them all, like a damned Juggernaut. As God liveth, we are fighting the seven-headed Beast; and, does any decent man or woman ask why?

It is the Beast that we are leagued together to fight. And if this be not the very elemental heart of patriotism, in God's name, what is? Make it as broad as you like; make it as personal as you please it is all one. No longer are you and I isolated savages, whose safety and honor are nothing to the other. We belong to one family. I am pledged to help defend your wife and children from the Beast; and you are pledged to help defend mine. We can no more evade our responsibility to each other than to our own families. If I fail, I can no longer look into your face; if you fail, you cannot meet my eyes. That is patriotism, stripped to the bone. Make no mistake; you and I cannot *choose* whether we will be responsible or not. *We are*. There is no elective heroism about accepting our responsibility and exercising our patriotism. There is deep, damning shame in repudiating or withholding it.

Suppose that in the city where you and I live, a brutal gang of degenerate Jack-the-Rippers should stalk the streets in broad daylight, defying the police, murdering our boys, raping our women and our young girls, and mutilating our little children. Would you shrug your shoulders and keep an indifferent mien because it was my boy that was murdered and not yours, my daughter that was violated and not yours, my child that was tortured and not yours? Behold, a worse than Jack-the-Ripper is here. Murderer, liar, whore-monger, baby-killer—all, all of these is this vile Prussian Thing; not in the heat of passion, but in cold blood, as a demoniacal, Machiavellian system.

Ay, there's the rub! There is where we pass from the fight itself to the crusade beyond the fight. After all, this damnable Prussian Thing is not a Great Exception. 'Tis not a freak. 'Tis but autocracy run to seed. It is the logical extreme development of the system which for centuries has held the Old World in its grip. France and England were strangled in its coils for hundreds of years; cast it off by violence two or three separate times before they

were finally rid of it; and have lived ever since in the shadow of its sinuous form. Russia has just wrenched herself out of its grasp; and, no matter what may now be happening to Russia, or what may yet happen, anything, anything is better than the despotism from which she has finally escaped.

But America—America threw the damnable Thing off at birth; that was her birth. Her career has been, not a living protest against autocracy, but a living example of freedom from it. And now the hideous Thing has crept up on us—US—and laid its horrid maw on us, and we are looking into its leering eyes, and feel its hot tigerish breath on our faces; and we realize that the world is not safe from it, never, never will be safe from it, till it be crushed. Yes, and we realize that we must help to crush it. We must hunt it down, like God's hounds hunting down evil, till it be cornered, snarling in impotent fury, and dragged to its death.

'Tis a solemn, deadly task that has been thrust upon us. There is no choice in the matter. In this war there are no volunteers, save those who volunteer to shirk and to slack. No decent man can make such a choice. He must, he must do, not only his "bit" but his all, or forevermore slink shamefaced from the scorn of his own self-respect. Not the gift of his money and his possessions, alone, though these, too, are necessary; but, the splendidly reckless sacrifice of *himself*, of all his dearest hopes and plans, of all that life holds precious, even of life itself, is required of him. "He that loveth father or mother, or husband or wife, or lands, more than Me is not worthy of Me."

Upon your faithfulness and steadfastness and sacrifice depends more than you dream. "It will matter little in the day of judgment," says the author of John Inglesant, "by what name you have been called, whether Catholic or Protestant, Jesuit or Jansenist, Jew or Gentile. These and similar things are mere accidents of birth and circumstance. But, it will matter greatly whether, having chosen your part, you follow it faithfully to the end. For, be sure that no misery is equal to that of the man who, when men have said 'So-and-so is there on guard, there is no need to take further heed,' has deserted his post, or faltered in the hour of danger, to the ruin of

the cause he has made his choice. God grant such misery never may be yours."

America will triumph. No sane man has any doubt on that score. In this war

God has set
Himself to Satan. Who can spend
A moment's mistrust on the end?

God knows after what terrible violence. The sun shall be turned into darkness and the moon into blood; then shall the end come. But, there will be an end. The Beast will be slain, and all that he stands for. Empires and emperors, kingdoms and kings, will pass away; their day is done. The Republic of God is at hand. But, O my brother, will you and I share in the victory? Be not deceived. Do not expect to be swept into the final triumph on the crest of a universal wave. A wave there will be, without doubt; but, it will be the tremendous aggregate of individual effort, and they who drift passively and complacently on the surface, no less than they who vainly try to stem its progress, will be submerged in its resistless tide. Not even sympathy with the cause will avail anything; nothing short of being a part of it.

What are you doing?

Had I a dozen sons, each in my love alike, I had rather have eleven die nobly for their country, than one voluptuously surfeit out of action.

—Shakespeare.

TO WHOM ARE WE INDEBTED?

Authority in medicine, the same as in science, does not exist. No man in science is justified in asserting aught that can not be supported by control-experiments. "Authorities" are men who have written textbooks, most of which are antiquated when they appear, and most of which are published through favor. For this reason, the courts will not receive any book as authority, regarding it as a mere expression of individual opinion. The scientific spirit of the day should disclaim as false and misleading any authority which will not submit to test and criticism of its truth—and truth often comes from obscure quarters. "Can any good come out of Nazareth?" "This is always the question of the wise-ones and the knowing ones," says Feuerbach. "But, the good, the new comes from exactly that quarter whence it is not looked for and is always something differ-

ent from what is expected. Everything new is received with contempt, for, it begins in obscurity. It becomes a power unobserved."

If our materia medica is of any value at all, let us remember that not a single vegetable drug is mentioned in the United States Pharmacopeia the uses of which were not discovered by the wild man first, then used in domestic medicine, and only afterward by country practitioners and next investigated by the homeopathic and eclectic physicians, and by them introduced into their literature. Then, after a time, they were adopted by the regular profession.

The self-constituted "authorities" in medicine have opposed and ridiculed nearly every advance in therapeutics, nearly every remedy, nearly every method. But, often "ridicule is the test of truth" and it is well to remember that truth is for authority, not, authority for truth.

According to Pereira, the credit of introducing cinchona rests between the Jesuits, the Countess of Chinchon, the Cardinal de Lugo, and Sir Robert Talbor, which latter employed it as a secret remedy. Mercury, as an internal specific remedy, was brought into use by that "impudent and presumptuous quack" Paracelsus. Arsenic was introduced into England, as a remedy for intermittents, by Doctor Fowler, in consequence of the success of a patent medicine, the "tasteless ague drops." Colchicum came into notice in a similar way from the success of the "eau médicinale" of M. Husson, a French military officer. Iodine was discovered by a saltpeter manufacturer. Sulphur was used in an ointment by the common people, for scabies, long before it was employed by the medical profession. Strophanthus, that is now so important in some directions, came to us from the savages of Africa, who used it as an arrow-poison; thus bringing it to the attention of Stanley, the explorer, who, through Henry S. Wellcome, of England, introduced this drug. All American vegetable drugs had their original setting in such "irregular" directions, and it is to this that the medical profession as a whole is indebted.

The same rule applies to the old compound galenics of the Pharmacopeia, such as the compound tinctures of European origin; they drifted into practice through domestic uses or as specialties of physicians

of the olden time, who often attached their own names to them. Thus we have "Glauber's Salt," introduced as the "secret salt of Glauber"; "Goulard's extract" (solution of lead subacetate) and "Labarraque's solution of chlorinated lime." In like manner, the original home of certain materials used first in domestic practice gave us, for example, such names as Epsom salt, from the Epsom Springs, England.

The early medical history of our remedial agents is extremely interesting, the history of many of them being very romantic.

Taking it all in all, the medical profession, as a whole, must acknowledge its indebtedness to the wild man, the domestic observer of remedies (vegetable and otherwise), and the country practitioner, who was, necessarily, compelled to study the materia medica in the treatment of diseases that were his responsibility, the gathered results finally coming before persons in "authority," who either accepted or rejected the statements originating in these sources, or, investigating for themselves, gave no credit other than their own introduction of them.

Not only the Eclectics and the Homeopaths, but, hundreds and thousands of Regular physicians helped to develop the American materia medica. They did not recognize "authority," but, freely used, as they saw fit, remedies not authorized by "authority," regardless of whether they were or were not named in the Pharmacopeia.

In an article entitled "Vegetable Drugs Employed by American Physicians," contributed by Professor John Uri Lloyd to *The Journal of the American Pharmaceutical Association* for November, 1912, he shows that, out of over ten thousand general practitioners of *all* schools, and of those only who were college graduates and whose names were in the Medical Directory, the unofficial drug cactus headed the list as the most popular drug, being prescribed by 6239 of the 10,000 physicians responding! And, yet, the "authorities" pronounce it worthless, as they do echinacea, that was used by 5065 physicians; and, strange to say, echinacea *headed the list of remedies* named by physicians *other* than Eclectics, while it stood fifth in rank as named by eclectic physicians. It is not possible that all the physicians who use these drugs are fools. It is certainly not true that the

only men capable of judging the value of a remedy are in pharmacological laboratories or members of the Pharmacopeial Committee or of the Council of Pharmacy and Chemistry.

Many of the drugs dropped from the Pharmacopeia are *not* dropped by practicing physicians. "Authority" that is not experienced in practical directions can not compel a qualified physician to consider himself incompetent. He rebels against the reflection that his diploma and his subsequent experience in the practice of medicine are not sufficient to qualify him to judge of disease-expressions constantly before him, and of drug action that he knows from observation to be most pronounced.

Not infrequently we find the "authorities" to be men of restricted observation and not nearly so well versed in clinical experience as is the average doctor actively engaged in bedside-practice.

Socalled physiologic therapeutics, such as electrotherapy, hydrotherapy, mechanotherapy, massage, et cetera, were first employed by "irregulars" and opposed by "authorities"; and only when the latter were forced to recognize the value of those agencies did they "get into line." Even psychotherapy—"suggestive therapeutics"—which is perhaps the most valuable of all, was one time denounced as unscientific and quackish. Strangest of all, the very nation which laughed to scorn one of its most noted early promulgators only lately claimed itself its most ardent advocate, namely, France with regard to Charcot; and at Nancy there is a renowned hospital where only psychotherapy is practised.

To Madame Curie, the discoverer of radium, and to Pasteur, too—both of France—do we owe a debt of gratitude. A volume could be written of the beneficent discoveries that have come from hitherto obscure sources. So, let us be thankful for the good and true things that come to us, even though the "authorities" were not the first to introduce them.

The time has passed when a few men can successfully set themselves up as authorities or dictators, or arrogate to themselves any special theory or procedure. Candid practitioners today recognize good in all systems based upon scientific thought and pursued with intelligence and sincerity. By means of release from the shibboleths of the past and from rigid adherence to a

given "authority" or "school," the freedom of the present practice is greatly enhanced, to the immense benefit of the patient and the lasting honor of the physician.

We cannot too strongly deprecate any tendency to discord and contention among a body of men to whom is accorded the highest privilege decreed by the genius of science—that of alleviating human misery. Whenever the physician's range of study and practice becomes limited by prejudice or narrowness of intellectual vision, he falls below the standard set by the canons of christian sympathy and the dictates of steadfast devotion to the amplest interpretation of his calling.

Mistake, error, is the discipline through which we advance.
—Channing.

A NATIONAL PROGRAM OF MILITARY MEDICINE

An editorial article in *The Medical World* for December last makes the very timely and appropriate suggestion that the medical colleges should follow the lead of the training-camps where the medical officers of the national army are being schooled in the various duties comprised within the term of military medicine; the writer pointing out that medical colleges should teach military surgery, military hygiene, and other branches that are required to fit their graduates for military duty.

In addition to this, the editorial in question proposes that home physicians take up training in military subjects in their home towns, the medical societies to take up this work and continue it, so that all physicians may have at least an insight into military medicine. This would be of more practical value than patriotic meetings, with call to the colors and abstract remarks on preparedness.

It is suggested that a definite plan be elaborated that might be followed by all societies. For instance, it is proposed that the subject of military hygiene be taken up for the meetings of the first month, those during the first week to discuss hygiene of camps, using one of the recent books on the subject by army men. During the second week they might take up the subject of camp diseases, and during the third week, say, water and food.

The plan is, to have all medical societies that meet during the first week discuss the

subject mentioned for that week. During the second week, all societies would discuss the subject of the second week, and so on. In this way, any physician can get the information at some of the societies during the first week, and he may get the second week's subject or lesson during the second week at some other society, and so on. This will make the information available for all physicians. It is understood that all the meetings are to be held open to all physicians.

For the second month, military surgery might be taken up. The first week could be devoted to first aid in battlefield-wounds; the second week to infected wounds; the third week to fractures; the fourth week to abdominal surgery.

In the third month, military surgery could be continued. The first week could be devoted to wounds of the head; the second week to the chest; the third to any subject that has been brought up in the discussions and needs further study, and so on.

For the following months, there should be plenty of subjects that have been brought out, but need further amplification.

It is better to have the subject cover the entire week, rather than to be restricted to one night, so that, should a physician miss one meeting, he can get the information the next night at another meeting. Of course, this would be possible only in large cities where some medical society is meeting every night.

Without earnestness no man is ever great, or does really great things. He may be the cleverest of men; he may be brilliant, entertaining, popular; but, he will want weight. No soul-moving picture was ever painted that had not in it depth of shadow.

—Peter Bayne.

THE RED CROSS

We hope that every physician who reads these lines can say that he helped with his money and with his influence in the big push to raise the \$100,000,000 fund for the American Red Cross. We also hope that all of you are right now doing your bit to increase the membership to the 15,000,000 mark, which is the aim of the campaign now under way. At the beginning of the war, there were 200,000 members of the American Red Cross Society in the United States. At this writing, the number is said to be about 5,000,000. We have 100,000,000 in the United States, and, certainly, there should be at least *one* member in

every family. It ought to be easy to secure 15,000,000 members. We want to appeal to every one of our readers to do all that he possibly can to bring this about.

The aims of the American Red Cross have been stated by the Red Cross War Council to be as follows:

"1. To take such measures as are necessary, in cooperation with the Army and Navy, for the protection of the health and welfare of soldiers in camps and cantonment, and of civilians whose welfare is involved in war-conditions.

"2. To stimulate and guide the volunteer work of women in the manufacture of supplies and comforts needed by troops and civilians abroad and by men in training in this country.

"3 To cooperate with the Government and with all relief-agencies in caring for the dependent families of men in the military and naval services and to relieve suffering caused by any disaster.

"4. To maintain, at the lowest cost consistent with efficiency, machinery to assure the uninterrupted performance of these duties of the relief-work in Europe."

Certainly, every reader of this journal can subscribe to all this, and, surely, there is no American who is not proud of the work which this great organization has done and is doing at the present time. We learn from the brochure entitled "The Work of the American Red Cross" (comprising 144 pages), recently distributed, that up to date approximately \$88,000,000 in cash has been collected for the war fund. Only a very small percentage of this has been used in salaries. On the salary list, there are now only three persons who receive more than \$5,000 a year and 24 who receive more than \$2,500 a year, while 182 receive between \$600 and \$1000 a year. The big men—the real leaders in this great movement—are doing their work without remuneration.

The Red Cross has raised and equipped 49 base hospital units for the Army and 5 for the Navy. More than 12 of the Army units and 2 of the Navy have been mustered into their respective medical corps and are now seeing service abroad. The Red Cross has also organized 45 ambulance-companies, with a total personnel of 5580 men and women. A general hospital for the Navy has been established in Philadelphia, convalescent-homes have been built

at Ft. Oglethorpe and Ft. McPherson (Georgia), and mobile laboratory-cars have been provided for use in case of emergency.

There have been enrolled 14,000 Red Cross nurses, and of these approximately 3000 have already been called into active nursing-service. Millions of women all over the country are constantly engaged in knitting and making hospital-garments, surgical dressings, comfort-kits, and clothing for refugees. It is estimated that the value of the work of these faithful women during the next twelve months will amount to nearly \$40,000,000. About 3,000,000 surgical dressings are promised to be sent to France every month for the next six months.

The work of the Red Cross in Europe is under the direction of Major Grayson M.-P. Murphy, whose headquarters are in Paris. He has under his control a working staff of 804 persons, of whom 347 are paid by the Red Cross, the others being volunteers or supported by their former employers. The average cost, to the Red Cross, for each of these European employees, therefore, is only about \$300 per year.

The Red Cross is serving, through its hospital supply-service, 3423 military hospitals, French as well as American, and it operates 16 warehouses and a motor transport system. Approximately 15,000 tons of material (hospital and general relief-supplies) is distributed monthly from these warehouses.

This is only a brief outline, in fact, only a comparatively small part of the work of this wonderful organization. We have not even mentioned the establishment and maintenance of canteens, rest-houses, recreation-huts, and other means of supplying comforts to our armies and allies. We have said nothing about the commissions sent to Russia, France, Italy, and Roumania, and of the appropriations made for work in the armies of these countries; nor have we mentioned the refugee- and relief-work, the work among the tuberculous in different parts of Europe, the work for children, the medical research, and the nonmilitary work. All of these are important and all require money.

And this brings us back to where we started. What are you doing, doctor, to build up the membership of the American Red Cross, to give it the additional money

which it will need soon? We are told that the \$100,000,000 raised will be virtually exhausted by spring. The more that we are able to raise now, the less will be required later. Take hold of this problem in your own community. Get people to thinking about it. Interest the churches and the women folk, the boys and the girls, and all the other vital, energetic elements of your community. The need is great, the workers are too few.

Vigor is contagious; and whatever makes us either think or feel strongly adds to our power and enlarges our field of action. —Emerson.

MODERN DISEASES

With the general advance of medical science, there has been developed, apparently, in modern times a host of new diseases, with which our ancestors were unacquainted.

It is a fact beyond dispute that the average man of the present day is stronger, healthier, and less liable to attacks of disease than in any preceding age. There are no more real diseases than there were a hundred years ago; but, with our increasing knowledge, we are able to observe differences not then noted, and to separate into distinct diseases, each requiring different treatment, certain affections that formerly were grouped together under one general appellation. Pneumonia, for instance, was rarely heard of in former times, yet, "lung fever" was none the less fatal, and even more to be dreaded, in the absence of any rational method of treatment. The same is true of appendicitis, formerly known as "inflammation of the bowels." Before the general use of the microscope and chemical reagents for testing the urine, diabetes, nephritis, and many other diseases were not thoroughly differentiated, but were called by the general name of kidney trouble; and they were just as common as in these modern times.

The forms of brain disease accompanied by paralysis were in existence long before the term paresis was introduced into the medical vocabulary, and the victim of alcoholic dementia is not favored with the sight of any more zoological curiosities than his predecessor who merely had the common jim-jams.

"Heart failure," is a term sometimes employed even at this late date to indi-

cate the cause of death, and it is a most unfortunate one. It really has no meaning at all, for, the failure of the heart to do its own work always occurs at the end of life. It may be said that death is always caused by the failure of either the heart or the lungs to perform their duty, and that the various forms of accidents or diseases are only indirect causes inducing such failure. Heart failure is not a disease, but, the result of disease, and there is nothing new about it whatever. When applied to organic or functional diseases of the heart, it may have some significance, but, such a general term had best not be used.

Notwithstanding the wails of the pessimists, mankind is steadily improving in bodily strength and vigor.

The average length of life is greater and the standard of bodily health higher than ever before; and, if it were not that medical and sanitary skill now preserves, for a life of imperfect health, many weak persons who in former times would have succumbed to the first attack of disease, the standard would be even higher than is actually the case.

In the works of old writers, there are many passages that show that a man was considered old and past his prime at forty, while now at that age he is in the very height of his powers. There may be more diseases now than formerly, but, there is less disease, and a vastly greater knowledge of how to avoid it, or, when attacked, to bring it to a favorable termination.

One truth discovered is immortal, and entitles its author to be so; for, like a new substance in nature, it cannot be destroyed. —Hazlitt.

ARE SYMPTOMS THERAPEUTIC OR DIAGNOSTIC?

When anybody says that the science and art of medicine is susceptible of improvement, we heartily agree with him. When, however, such a one asserts that the practice of the entire past not only has been mistaken, but, absolutely and diametrically wrong, so that it has worked directly against the patient, instead of for him, we take refuge in our Missourianism and refuse to accept the dictum until it has been proved to our full satisfaction. For, the chance of humanity being mistaken, or exaggerating, or posing, or just

lying is so very much greater than that of such an assertion being true.

Now we reach our text, as found in the October issue of *The Journal of the Medical Society of New Jersey*. It is from an address delivered to said State Society by Daniel E. Drake, the director of Idylease Inn. To guard against the possibility of unfairness by only partly quoting, we shall reproduce the entire opening paragraph:

"Is there anything more interesting or important in modern medicine than the realization that has at last come to most of us, that the symptoms which we have treated again and again are protective and of infinite value, rather than of harm? What a revelation this has been and what a complete revolution it has made in our treatment of the sick. Let us consider some of the most prominent protective symptoms which, until in recent years, have been erroneously treated as disease.

"First let us consider fever. One of my physician friends has the bedside-charts of his own case of typhoid fever, which were made only twenty years ago in the Massachusetts General Hospital in Boston. The treatment, directed by a prominent member of the Harvard Medical School faculty, consisted in giving the newly introduced drug antifebrin in 40- to 60-grain doses every four to six hours. The charts show frequent 10-degree drops in temperature and a pulse rise to 180! If the patient had the constitution of an armadillo and the viability of a kicking horse, the treatment would have killed him there and then.

"Now we know that the fever accompanying typhoid, as well as all other infective conditions, is the most important protective reaction which is in immediate evidence. Without fever, the mortality of typhoid would undoubtedly be doubled—how grave a fallacy, therefore, to attempt to lower it, as in my friend's case."

The attempt to treat typhoid fever by attacking the febrile condition with dram-doses of acetanilid was absurd—the claim, though, that the fever is only protective is quite as absurd in the other direction.

To us, the indication presented by undue or too long-continued fever in a typhoid-patient is that of ascertaining the cause of the undue temperature. The great significance lies in its diagnostic value.

To repeat an example we have often quoted; in a typhoid-case where the fever lasted far into the fifth week, the doctor administered an enema of kerosene. In this way, he removed at once the fever and its exciting cause, in a mess of fetid fecal matter that had been lying in contact with the diseased tract of the intestine.

Despite Bier and his savage collaborators, we look upon this view as rational, far more so than that which makes every fever in an infection a means of cure, and nothing more. That fever in infections is protective, nobody now doubts; but, to hold that it never is injurious, is going too far. Sometimes it displays about as much consideration for the patient as did the ape who crushed the head of his sleeping master, in the endeavor to kill a fly. The pneumonic who has a temperature of 106 is in direct and imminent danger from the hyperpyrexia, even if this has been excited by an extreme toxemia. So, also, when in the eruptive fevers the temperature climbs swiftly to 112 degrees, we may safely disregard the protective theory and proceed to save our patients' lives by cooling them down to a reasonable degree.

Doctor Drake's second citation is as to the curative powers of pain. Here we come nearer to agreement. It is well on toward two centuries since Benjamin Franklin told so graphically how the pangs of gout conduced toward a more sanitary regimen. We have stood by and watched the agonies of delirium tremens, with the remedy that would have given swift relief in our pocket (where it remained), while we solemnly winked at old Dame Nature and whispered to her: "Go to it, old lady, you're on the job."

But, the therapeutic values of pain lie almost entirely in the psychic department. Otherwise it is of such preeminent importance in the line of diagnosis as to make its few somatic applications insignificant. When the pangs of strangulation direct attention to a hernia or a tight bandage, we appreciate this as a warning, never as a cure.

As the next citation, we agree most heartily with Doctor Drake. There is no such disease as indigestion, and gastric disorder simply means nature's warning that one must correct the habits. The only real remedy for vomiting is, to keep

the stomach absolutely empty for twenty-four hours. Vomiting also is diagnostic in the highest degree, as are the multifarious ailments comprised under the designation of indigestion as used by the layman. However, here the therapeutic value exceeds in importance. Gluttony and bellyache can not exist simultaneously.

One significant feature about this paper is, that it was discussed freely by a number of good men at the meeting, and not one of them disagreed with the reader in any particular. That is, the author's conclusions, exaggerated as they appear to us, were accepted by his audience as a whole. He, therefore, represents the unanimous view of the profession of his state.

Well, we must be contented to rank with the heretics.

To love truth for truth's sake is the principal part of human perfection in this world, and the seed-plot of all other virtues.
—John Locke.

DECORATION AND HEALTH

Color is a species of ornament that, like form, doubtless has its laws, though as yet neither has been discovered, and we call form and color, like much of the practice of medicine, empirical arts. We observe that the collocation of certain spaces or of masses of certain colors gives us more pleasure than does that of others, and we try to recollect these collocations, if we deal with color, and use them when we have occasion. It has been observed that the primary colors that are complementary—that is, whose mixture produces white—go well together, and that certain secondaries and tertiaries set off primary colors. Chevreul found that the saturation of the eyes with a color caused it to see the complementary color if a white surface was looked on; and Chevreul also discovered that, if now we looked at another color, it was modified by the complementary color of the first one.

In choosing a color, we should be careful to have such a one as we can live with, for, most people have their preferences and dislikes. The color of a lady's boudoir is mostly chosen because it sets off her complexion. In a room where we work, we are soon conscious of an objectionable color, which irritates instead of soothes us. Certain colors and certain

tones are either beneficial or prejudicial to health. Very dark rooms are prejudicial, and red or yellow will also have a bad effect on our health if we have to remain in rooms of either color all day every day.

A manufacturer had a women's workshop painted yellow, and found much more than the usual sickness among his employees. A doctor recommended painting the shop white, and normal health was restored among the workers. Growers of hyacinths have noticed a marked effect on their blooming when they are put in classes of certain colors.

This age is a peculiarly health-seeking one, and people do not now seek health as the Greeks did, by early rising, temperance, open-air exercise and training, but, they ask how health can be preserved and promoted by the removal of external sources of disease, so that they may have freedom to infringe nature's laws with comparative impunity. External poisons are the most important things from which to protect ourselves, especially when we have enfeebled our bodies, and these are mostly conveyed to us by mephitic vapors and what we physicians call septic dust.

We want our houses and other buildings so constructed that they can be freed outside from their palls of dust and soot by means of a fire-engine or a sponge, and inside by the broom, the dusters, and the flannels of the housemaid.

Foul and poisonous air has scarcely any connection with decoration, but, with one or two exceptions, it is in relation with pure science and its applications. The exceptions are when some of the materials used for decorations have a pernicious chemical action on the air or parts of their substance readily come off and poison us when we breathe or when in contact with our skin. The former is the case when preparations of arsenic and some other dyes and pigments are used and are not fixed by varnish.

If a man is not rising upward to be an angel, depend upon it, he is sinking downward to be a devil. He cannot stop at the beast.

THE NON-BEVERAGE ALCOHOL LAW

We wish to call the attention of our readers to the restrictions and requirements imposed upon them by the War Revenue

Act of October 4 in relation to their handling of alcohol for medicinal purposes.

This law went into effect December 1 and there are severe penalties for its violation.

The fact that no physician may purchase pure, unmedicated alcohol for medicinal use without first obtaining a permit and filing a bond with the Revenue Office is not, of itself, likely to be overlooked by the doctor, because the druggist or wholesale dealer from whom he makes his purchase will see to this. They will not sell to him unless he does have a permit or a bond certificate. The point at which, if anywhere, he is likely to trip is, in the use he makes of the alcohol that he obtains.

Briefly, the regulations are these: The doctor must not sell or dispense pure unmedicated alcohol, *under any circumstances*, to anyone who does not have a permit similar to his own. He may, however, sell or dispense not more than one pint at a time of alcohol to his patients provided he first medicates it according to one or other of the following formulæ:

1. Carbolic acid, 1 part, alcohol 99 parts.
2. Formaldehyde 1 part, alcohol 250 parts.
3. Bichloride of mercury 1 part, alcohol 2,000 parts.
4. Bichloride of mercury 0.8 gram, hydrochloric acid 60 mils, alcohol 640 mils, water 300 mils.
5. Bichloride of mercury 1-2 grains, hydrochloric acid 2 drams, alcohol 4 ounces.
6. Formaldehyde 2 parts, glycerine 2 parts, alcohol 96 parts.
7. Carbolic acid 1 dram, tannic acid 1 dram, alcohol 1 pint, water 1 pint.
8. Alum 1-2 ounce, formaldehyde 2 drams, camphor 1 ounce, alcohol and water each 1 pint.
9. Lysol 1 part, alcohol 99 parts.
10. Liquor Cresolis Comp. (U. S. P.) 10 mils, alcohol 1,000 mils.

The containers of all alcohol medicated by the prescribed formulas must bear a Poison Label.

And he may dispense alcohol as an ingredient of his compounded medicines, provided the other ingredients of the compound render the alcohol unfit for beverage purposes.

Applications for permits and bonds are rather complicated procedures, which the executed by Surety Companies, and this is doctor had better not attempt to carry out himself but should delegate to an attorney. The Government prefers the bonds to be executed by Surety Companies, and this is

in every way the best course for the doctor to follow, since the form and wording of the bond are very particular matters. The fee for the minimum bond (which covers all the requirements of the average physician) is \$5.00. Orders for alcohol have to be written, in triplicate, upon order blanks furnished by the Revenue Department.

We advise every physician who handles alcohol in his practice—and we presume that includes virtually every reader of *CLINICAL MEDICINE*—to attend to this matter without delay, if he has not already done so. We do not imagine that conformance with the law in this direction will work any very great hardship to those physicians who employ their remedies mainly in the form of tablets or granules of the active principles. But, to the extent that they do use and dispense alcohol, of course, the stipulations of the law must be strictly observed.

The world owes all its onward impulses to men ill at ease. The happy man inevitably confines himself within ancient limits. —Hawthorne.

THE WAR: THE REAL THING

Those of us who know what real war is get very tired of these preliminary folderols and the gush and hysterics accompanying. Our brave boys have assembled, taken some training, and marched away to the tune of "Tipperary," amid the plaudits of assembled multitudes and the tears of women relatives. They have swung along the streets of old London, under the eye of royalty, have progressed triumphantly through Paris, and have been smothered with flowers and embraced by pretty damsels. The papers are filled with appeals for smokes for our Sammies, for Thanksgiving and Christmas dinners, for 'broidered handkerchiefs with which to wipe their little noses, and so on ad nauseam.

Now, at last, the boys get a small taste of the real thing. The unspeakable Teutons, curious to know what manner of man the American soldier may be, gets up a little trench raid and under cover of a barrage carries off a few specimens for inspection, leaving a few dead and wounded.

How surprised is everybody! Reminds one of the early days in Cuba, when a patrol was fired upon by the Spaniards and Hamilton Fish's son and a few others were

slain. They wanted to court-martial someone at once.

The fact of the matter is, that we are not yet awake to the realization that we are at war, that we have embarked in the armageddon, participants in the hugest conflict that has ever been waged on this green earth. We need a rude shock to arouse us. Just let the news of a real battle come across, with lengthy lists of dead Americans. We just remember the North during the earlier days of the Civil War, and the same features were in evidence. But, when Sumter was fired upon, the whole people awoke at once and a fury of rage swept the land. Thenceforth there was no lack of appreciation of the task before us or of earnest determination in the prosecution of the war.

War is war, and men are going to lose life or limb in battle. Grim reality will soon replace the frills; bayonet and bomb, the flowers and charming kisses. The callow youth now singing as he marches onto the transport, will soon be the silent, efficient soldier; the smiles and dimples replaced by care-lines and thought-clouds; the roundness of well-fed youth gone for the leanness of condition.

MILK FOR THE BABIES

The high price of milk is having a very unfortunate effect of cutting down the amount of milk fed to young children, and as Dr. Grace L. Meigs, Director of the Child Hygiene Division of the Children's Bureau of the U. S. Government of Labor, says, "milk is one food that all young children must have if they are to be strong and healthy." There is no substitute for milk, and the startling increase in price is unfortunately leading parents to economize on this essential to the healthy development of their children. In New York City an investigation showed that 125 families had stopped taking milk entirely, and in 25 of these there were babies under one year of age. It is also learned that many parents are giving their children tea and coffee as a substitute for milk.

Physicians everywhere should bring it home to their clients that, whatever they economize upon, this essential element of child nutrition should be purchased in a quantity sufficient for the children's needs.

Leading Articles

Twenty-five Years' Progress in Public Health and Sanitation

By W. A. EVANS, M. D., D. P. H., Chicago, Illinois

THE record of the last twenty-five years in preventive medicine has been one of steady progress rather than of epoch-making discovery. In the early part of the last half of the nineteenth century, the Pettenkofer theory, that disease is associated with gross filth, was made the basis of health work. Cities cleaned up their gross filth and, in consequence, there was a very marked drop in the death rates of great centers of population. Late in the '80s, health-departments began to make general application of the germ theory of disease. In consequence of this policy, there was another sharp drop in death rates. During the last twenty-five years there has been no such radical change in the methods of sanitation and hygiene. Although there has been no sharp decline, there has been a steady, even improvement in death rates and sickness rates.

In 1892, Chicago's death rate was 21.85; in 1916, it was 14.52. In 1890 (the nearest yearly rate available), the death rate in the U. S. registration area was 19.6. In 1915 (the last yearly rate available), the death rate in the then registration area was 13.5.

The growth of the registration area is proof of itself of the same healthy tendency. In 1892, the only states in the death registration area were Massachusetts, New Jersey, District of Columbia, Delaware, New Hampshire, New York, Rhode Island and Vermont, besides several cities in non-registration states. In this area, 31.4 percent of the total population resided. In 1915, all of the states were in the area except Illinois, Iowa, North Dakota, South Dakota, Nebraska, Wyoming, Idaho, Oregon, Nevada, Arizona, New Mexico, Texas,

Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, North Carolina, South Carolina, Georgia, Florida and Delaware. Some cities in these states were, however, included in the registration area.

Of the total population, 67.1 percent resided in the registration area. The indications are that this area will be materially extended within a year.

It was not possible to establish a birth registration area until 1915. That area now embraces the six New England states, New York, Pennsylvania, Michigan, Minnesota and the District of Columbia.

Typhoid Fever.—The improvement in the typhoid situation is a good illustration of what can be done in public hygiene. In 1893, just twenty-five years ago, Chicago's typhoid rate was 175. In 1916, it was 5. On December 8, 1917, it seems probable that the rate for the current year will be in the neighborhood of 2 per 1000. Other cities are keeping pace with Chicago in this regard. Even the rural districts are materially lowering their typhoid rates. This improvement has been wrought through improved sanitation and public hygiene, and especially through better sewage disposal, better protection of the water supply, and the pasteurization of the milk. In 1911, the United States Army began a demonstration of the efficacy of vaccination as a means for totally suppressing typhoid fever. The preliminary reports show that, in 1916, the 170,000 United States troops, regular army and national guard, had only 17 cases of typhoid fever and not a death. We can fairly say that within twenty-five years we have greatly repressed typhoid fever and

are now in position to suppress it completely.

Typhus Fever.—While we have not had much typhus in the United States, a limited experience in 1917 proves that we have been lucky rather than forehanded. Americans in Mexico and in other typhus-infected countries have shown a very great susceptibility to the disease. Within the last three years it has been demonstrated, as a practical proposition, that typhus could be controlled in even the worst-infected districts by antilouse measures.

Yellow-Fever.—In 1892, we were just emerging from the menace of yellow-fever. Epidemics, which prior to that time had been of yearly occurrence in the southern states, were beginning to occur at intervals of several years. Less than twenty years ago, the mosquito theory was for the first time successfully put in practice. However, there continued to be some yellow-fever in Panama up to a little more than ten years ago. Within a year a commission of experts has said that there probably is no yellow-fever anywhere in the world except in a small section of country in and around Guayaquil, and the authorities there have stated that a moderately comprehensive effort would wipe the disease out.

Malaria.—There is a general agreement in opinion that the United States is being rid of malaria, though statistical proof is lacking. Everyone is agreed that more than half the country that was malarial fifty years ago is now free from it, while large sections that were infected twenty-five years ago now know nothing of the disease. The Public Health Service and the various boards of health have recently made malarial surveys of various southern states. The International Health Commission, in cooperation with several health-agencies, has just experimentally determined the relative cost and efficiency of different methods of controlling malaria. Some governments are appropriating money for malaria control. There are many indications that the experimental work of Knott, Jones, Ross, Manson and many later scientists is bearing fruit and that the chronicler who a quarter of a century from now writes of the progress of preventive medicine will tell of the eradication of malaria from the United States.

Consumption.—The fight against consumption is planned on a basis of years of

repression and then a grand drive for suppression. The campaign along this line is being won. In Chicago, the consumption death rate in 1892 was 198.6. In 1916, it was 129.19. The number of deaths in 1907 was 4039; in 1916, it was 3227, and this in spite of an increase in population of 600,000. The reports from some cities show even a higher rate of improvement. There have been no radical discoveries in the last twenty-five years for the prevention or cure of consumption. The gain shown demonstrates the possibilities of improvement through education of the people in the right habits and customs.

Infant Mortality.—Statistics show that the greatest part of the improvement in death rates among children in the last quarter of a century is due to improvements in conditions relating to baby life and child life. Here, I will make use of statistics from Chicago, as I do so frequently in this article. I do this, because they are easily accessible, and not because they prove the point any better than the corresponding figures from other communities might substantiate it.

In 1892, when Chicago had a population of 1,100,000, 7514 babies under 1 year of age died. This was a rate of 6.26. In 1916, with a population of 2,600,000, there were 6907 deaths, or a rate of 2.765. A more accurate method of estimating is on the basis of the death rate of 100,000 babies born. Unfortunately, on this basis, no accurate comparison is possible, since no city had accurate birth registration in 1892. The best guess possible is that the baby death rate per 1000 births has been reduced about 50 percent in the course of the last twenty-five years.

Diphtheria.—In 1892, there were 1548 deaths from diphtheria among Chicago's 1,100,000 people. In 1916, though the population had more than doubled, the number of deaths was only 787. At that, the improvement in the diphtheria rate has not been as great as in some other parts of the world. Several very useful discoveries have been made and applied in this quarter century. The most important of these was, the practical application of diphtheria antitoxin to the cure and prevention of the disease. Next in importance was the discovery of the role of the carrier in spreading the disease. Among the later discoveries has been the Schick test for demonstrating

susceptibility, and the Von Behring toxin-antitoxin vaccination method.

Smallpox.—The United States has witnessed no extensive outbreaks of smallpox in the period under review, still, on the other hand, the disease has been constantly present first here and then there, never seriously menacing, and yet always a source of disquietude to some local health department. It may fairly be said that as a serious menace the disease has ceased to exist. Men in charge of armies or other groups of men completely under control no longer think of it as a menace. Still, the director of health of an unclosed community knows the danger to his office and his community. Every bit of machinery necessary for the eradication of this disease is in hand and worked out as to the minutest detail. Success waits upon the willingness of the people to be served.

The last twenty-five years have witnessed a great improvement in the manufacture of vaccine. I think some recently suggested changes in the method of vaccinating are improvements. A laboratory method of diagnosing smallpox has been suggested.

Pneumonia.—The discovery by Dochez, Cole and the others of the Rockefeller Institute staff, that there are several types of pneumococci and that the ordinary pneumococcus of the mouth is not the usual cause of pneumonia, is a recent finding of great promise. First, it lead to the preparation of a serum successfully employed in the cure of the disease. Now it is proposed to vaccinate against pneumonia. Vaccination done in the early winter confers an immunity that lasts until the summer following. Some health-departments now diagnose the type of pneumococcus responsible for each case of pneumonia reported, and regulate isolation, quarantine and disinfection on that basis. It cannot be said that up to date this discovery has materially modified the pneumonia death rate, but, it is probable that the next five years will witness a definite effort to control pneumonia on the basis of its being a contagious disease owing to a pneumococcus that is purely pathogenic and that the carrier element in its propagation is much less than it has been supposed to be.

Meningitis.—The English military authorities announce that they are able to control meningitis in military establishments. This is possible because of discoveries made

within the last twenty-five years. First, there was the discovery of the meningococcus, then that of the relation of carriers to the spread of the disease, then of the microscopic, chemic and bacteriologic methods of diagnosis, and, finally, a curative serum. The control of the disease is based principally upon practical methods for discovering carriers and disinfecting their noses.

Infantile Paralysis.—During the last twenty-five years we have witnessed a great increase in infantile paralysis. Let us hope that some of the discoveries made during our recent epidemics may show the way to methods for its suppression.

Bubonic Plague.—During the last twenty-five years there has been a pandemic of plague, but, how different in its results from the terrific pandemics of more ancient history! Even in Manchuria, the disease at its worst has been controlled. On two occasions, the disease has found a foothold in the United States—in California, in 1900, and in New Orleans more recently. However, in the meanwhile, the bacillus has been discovered to be flea-borne and the important carriers have been found to be rats and other rodents. No better demonstration of the power of health-agencies over preventable diseases, when they are given money and power, has ever been seen than in the control of these incipient epidemics.

Hydrophobia.—It was just about thirty-two years ago that Pasteur first tried vaccination against hydrophobia. Twenty-five years ago the treatment was fairly launched. Rabies has everywhere been lessened. In some countries where effort has been great, as, for instance, in England, the disease has been wholly eradicated.

War Hygiene.—The progress of sanitation and public hygiene since the present war began has been rapid. I assume that some one else will write of the improvements in surgery, and that in the course of his story he will tell of the marvelous improvements made in the treatment of infected wounds and in the prevention of gas-gangrene and tetanus. I assume also that still another will write on the improvements in curative medicine, and that in the course of his study he will tell of the perfected methods in the treatment of gassing, trench-jaundice, trench-fever, trench-foot and other war diseases.

I will limit myself to a few indications for the future based on recent events.

It is a little over ten years ago that the syphilis-organism was discovered. Other points in the life-history of that organism were subsequently discovered. Then came the discovery of the curative powers of certain preparations of arsenic. The war made manifest the necessity of including venereal disease in the category of communicable diseases and for making efforts to control them. The more advanced health-departments are now well launched on such programs. Furthermore, the public sentiment necessary as a backing for such work is aroused.

The war has precipitated agitation, in England, for a ministry of health. The indications are that this will be an accomplished fact before this article appears in print. Canada is rapidly following suit.

Measles has never been seriously regarded as a controllable disease by health de-

partments. A military authority—Colonel Munson—announces that measles is a respiratory disease and is fully controllable and preventable.

This by no means is a complete review of even the important accomplishments in sanitation and preventive medicine during the last quarter of a century. There is made no reference, for instance, to great campaigns that have contributed to the results indicated. Such accomplishments as improvement in water supplies, in milk supplies in general, the pasteurization of milk, better sewage disposal, the control of flies and mosquitoes, besides other improvements too numerous to mention, are not touched upon. In fine, the whole period has been one of steady, progressive improvement, productive of results for itself and laying the foundation for greater improvement in the next quarter of a century.

The Changes in Therapeutics During the Past Quarter of a Century

In Retrospect

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AS I sit alone in my library this December evening, I think of the days of long ago, when I dreamed of the future; not then realizing, as I do now, that every minute the hard present is crowding each one of us off into that unknown land that has no end and is ever changing.

The past alone occupies my mind tonight, and no barren lot in life, no deprivation, no disillusion shall or can ever rob me of the memory of those early days when, full of faith, hope, and lofty ideals, I resolved to be a physician.

Drugs and Drugging of the Dying Generation

I recall vividly my early boyhood days back in the 'sixties, when I accompanied my grandmother to the fields and woods, to gather medicinal plants, which were later hung up to dry on the big brown rafters in the garret; that wonderful mysterious garret, the roof-boards stained darkly with the rainstorms of many years, the floor piled

with castoff clothes, nuts, old books, pamphlets and furniture, all odorous with the drying herbs.

And the village drugstore, where I sold bloodroot, pokeroor, mandrake, and many other roots and herbs we had gathered! It seems to me that I can smell the peculiar scent of that drugstore as plainly as I ever did. The odor signified to me healing, something curative. No pharmacy has that odor today.

I implicitly believed then that our family doctor—and, for that matter, my grandmother—could select from that drugstore or from our garret a drug that would cure any disease known; for, had I not myself experienced the beneficent effects of bone-set-tea, "composition," "picra," sulphur and molasses, and other potent remedies in the various ailments of my childhood?

My faith in these simple remedies was natural, for, I knew, or thought I knew, that both my grandmother and the doctor cured nearly every sick man, woman, and

child in the neighborhood, save those whom God in His infinite wisdom removed from among us.

So, very early in life, I resolved to be a doctor; in 1874, I began as a clerk in the village drugstore, and in 1887 I took up the study of medicine in Rush Medical College, so that for over forty years I have been acquainted with physicians and familiar with their various and varied methods of practice.

I entered upon the practice of medicine with as unbounded faith in drugs as I had when a boy. Even as late as 1896, when the first edition of my textbook on *materia medica* and therapeutics was published, I still had the faith—but, let me add, that during these later years my confidence in many of my old medicinal friends has been more or less disturbed, although I still cling tenaciously and loyally to many remedies that I have been told by so-called “authorities” are worthless.

What changes have taken place in therapeutics in the past twenty-five or thirty years! While I am in this retrospective mood, let me recount to you some of the many changes I have witnessed; and you will make allowances, I am sure, if I make this article somewhat in the nature of a historical narrative, interjecting now and then a few personal comments, rather than elaborating a labored scientific résumé of the subject.

I well remember when ten to twenty grains of quinine sulphate was given within a period of not more than two hours for reducing the temperature in lobar pneumonia; or, for the cough, chloral hydrate (which was then a comparatively new remedy) with morphine, belladonna or hyoscyamus, and, if stimulating expectorants were needed, senega, squill, oil of turpentine and such like; while carbolic acid, creosote, the sulphocarbolates and other antiseptics were commonly employed, poultices and compresses were almost invariably applied to the chest, and I must not forget the big dose of calomel given to “clean out the bowels.” You know what the up to date treatment of pneumonia is—good nursing, plenty of fresh air, “watchful waiting,” and, if one is very scientific, the specific treatment with serums and vaccines.

I can remember when cold baths and the drinking of cold water were considered dangerous in cases of typhoid fever, still,

by the time I entered the practice of medicine, cold baths were all the vogue, as also were antipyretics. Some of my teachers and many physicians I know prescribed large doses of antipyretics, notably quinine sulphate and antipyrin, in the treatment of typhoid fever. You are doubtless familiar with the present treatment of typhoid fever! What a change!

Probably there has been a more radical change in the treatment of diphtheria than in that of almost any other acute disease. Previous to the early 'nineties of the last century, when diphtheria-antitoxin was discovered and introduced, the internal local treatment consisted in painting the affected areas of the throat of the diphtheritic patient with powerful escharotics, such as nitric acid, chromic acid, bromide, silver nitrate, and spraying the throat with a solution of carbolic or salicylic acid, chlorine-water or tincture of iron chloride, while internally large quantities of brandy were given every half to one hour, this latter not especially to sustain the patient, but, as the “authorities” recommended, for its “constitutional effects.” The mortality of diphtheria was very high in those days, while under the present way of treating the disease the mortality has been reduced seventy percent.

It was only as recently as in about 1890 that specific treatment of infectious diseases (in the meaning of specifically antibacterial and antitoxic) had its birth; tuberculin in 1890, diphtheria-antitoxin soon afterward. Before then, tentative experiments had been made in immunization against anthrax, but, unless I am mistaken, tuberculin was the first antibacterial remedy that was put out. After that, of course, the whole series of vaccines, bacterins, antitoxins, and serums came in quick succession. Then came Ehrlich's studies in the aniline-dyes; the discovery of atoxyl by a French chemist, its investigation and development by Ehrlich and other German investigators, and the application of arsenicals in many and various organic forms, in the treatment of protozoal diseases. Soon after the introduction of salvarsan, the remedy was heralded as a specific for syphilis, and mercury and potassium iodide practically were abandoned in favor of “606.” But, the pendulum swung too far and now is swinging back, for, the majority of syphilographers today, if I am not

mistaken, are using mercury in all cases, in conjunction with salvarsan.

Germ-products have been employed extensively, during the past few years, for the prevention of certain diseases, notably diphtheria-antitoxin and antivariolar and antityphoid vaccination. Antitetanic serum has proved of great prophylactic worth, although for curative purposes its value is less well established. Antidysenteric and antipneumococcic serums are being used, as yet, with somewhat doubtful effect. Fairly good results have been obtained from serums against bubonic plague and Asiatic cholera, while meningococcus-vaccine has given but inconclusive results.

At the present time, owing to the conflicting reports submitted, it is impossible to arrive at a just estimate of the evidence regarding vaccination and serum-treatment of infections generally. The view with regard to vaccine-treatment of staphylococcus-infections is generally favorable, although excellent clinical observers claim equally good results by the older methods. I have noticed that recently a considerable number of physicians have been making a specialty, as it were, of vaccine-therapy, and they enthusiastically support this line of treatment. Quite recently I read an article on the vaccine-treatment of rheumatism and arthritis, the author of which advised the use of an autogenous vaccine made from diplococcus rheumaticus obtained from the oral cavity, but, added that, if it were impossible to secure an autogenous culture then to use a stock vaccine, and if the first vaccine did not succeed then to try another, this experimentation to be continued until a satisfactory one were found or the possibilities exhausted. If similar advice were offered by a drug therapist, how he would be criticized! The author of the aforesaid article redeemed himself somewhat, however, in my estimation, in closing his article by advising the free use of alkalis in addition to the use of vaccine in acute rheumatism. I doubt not that a few of his patients recovered.

Came the Synthetic Antipyretics and Elegant Pharmaceutics

The early 'nineties also marked the beginning of coaltar derivatives. Some of you remember, perhaps, that antifebrin came out in 1889 or 1890 and that it was rapidly followed by others, thus devel-

oping into a long series of coaltar derivatives, good, bad, and indifferent, although very few would be classed in the third category. I recall with some regrets the practice, adopted for a year or two in my service at the Cook County Hospital, of giving from five to ten grains of antipyrin every two or three hours as an antipyretic in cases of typhoid fever, pneumonia, and other febrile diseases. I am somewhat comforted, however, by remembering that a few of the patients survived. I venture the assertion that but few of my readers can recall the names of more than two or three of those coaltar derivatives, to say nothing of employing them in their daily practice.

In this connection, I am reminded of old familiar names that I rarely see mentioned nowadays, among them aconite, gelsemium, valerian, gentian, veratrum viride, cannabis indica, arnica, rhubarb, grindelia robusta, squill, conium, matico, bromoform, iodoform, tannic acid, croton-oil, and a lot more; and where, oh where, are these that I so well remember, balsam of copaiba, oil of santal, buchu, cubebs, liquor potassae, sulphate of zinc, black wash—those pillars of hope to the young chap of twenty-five or thirty years ago! I cannot believe that there has ceased to be need for these old-time specifics. And, of the host of vegetable remedies that are conspicuous by their absence in the last edition of the *Pharmacopeia*, what of them? Can it be true that they all have been found false, unreliable, worthless? In their place, one finds, among many other new remedies, liquid paraffin, phenolphthalein, ichthyol, hexamethylenamine, orthoform and its analogues, aspirin, protargol, argyrol, not to mention many others.

Along, too, in the 'nineties, there was a great move in so-called "elegant pharmacy," and we were overstocked with palatable elixirs and other potent (?) pharmaceutics. The literature of these preparations promised much, and I am suspicious that many a doctor of twenty or twenty-five years ago acquired his knowledge (or ignorance) of therapeutics from the commercial pharmaceutical literature of the time.

In the matter of drug-therapy, the tendency toward getting away from or at least simplifying and using more correctly the oldtime galenic tinctures, extracts, and all the rest, also took its inception about

twenty-five years ago, and active-principle therapy (sometimes called alkalometry) began coming into the foreground a little later.

Active-principle therapy has been and is still very popular and undoubtedly grows in favor as the profession becomes more familiar with the giving of definite instead of indefinite remedial agents. Doctor Abbott can tell you about this. But, despite all the innovations and changes, have not the worthy galenicals survived? Professor John Uri Lloyd, of Lloyd Brothers (who, according to my notion, make the best liquid preparations of vegetable drugs in this country), can tell you whether this class of preparations is holding its own.

The Latterday Biologic Preparations

I confess, I do not know "where we are at." I no sooner hear of one new treatment or remedy before a new one seems to demand my attention. Not many years ago, my esteemed and talented friend, Dr. Charles E. de M. Sajous, of Philadelphia, brought out his remarkable work on the internal secretions. I don't remember the exact date when thyroid substance was first employed, but the development of medication by means of the internally secreting glands and other glandulous substances, and their extracts, is a development of the last quarter of a century, and bids fair to prove of great value in the treatment of certain diseases. Thyroid extract, we know, is of the utmost efficiency in various conditions of diminished thyroid secretion, including not only myxedema, but, cretinism, some forms of obesity, and various atypical nutritional disorders of the elderly, while there is perhaps no internal remedy equal to "thyroid-ectin" in hyperthyroidism, notably of the exophthalmic form. Those of you who are familiar with this subject know the great value and uses of such substances as adrenalin, thymus gland, pituitary body, ovarian extract, etcetera. "It is not unreasonable to hope," says A. L. Benedict, "for glycolytic ferments in the treatment of diabetes and for ferments to regulate the fat deposit and restoration, and even for such as may profoundly modify various metabolic processes as yet vaguely understood."

It is within the last quarter of a century that pharmacological work was undertaken more thoroughly, more exactly, and in far

greater extent than ever before. Experimental investigation of drug-action on animals is the work of this period; but, like many other things in medicine, hasty deductions by enthusiasts led to inaccurate reasoning and imperfect results. Pharmacologists failed to take into account that there is a difference in the action of certain drugs in disease and in health, and that, moreover, there is a mighty difference between a sick, anxious man or woman and a healthy pup or guinea-pig. However, I am glad to see a closer relationship growing up between pharmacologists and clinicians, there being already noticeable a closer contact between the science of drug-action and the art of therapeutic application.

There Is Some Good in All

Along with the progress and changes mentioned, there has been rapid progress and development in what has been appropriately termed, by J. Madison Taylor, "reconstructed therapeutics" or allied therapeutic agents. These agencies are, briefly, dietetics, hydrotherapy, electrotherapy, roentgenotherapy, radioactive therapy, all branches of psychotherapy, mechanotherapy, and spondylotherapy, etc.

I quite agree with Taylor (whose article in *The New York Medical Journal* for June 9, 1917, I would advise you to read) when he says: "Reserve forces of the organism are ample, if they are made available, conserved, and fortified by means of agencies exerted from without, and are on a par with agencies exerted from within. . . . While it is obvious that certain remedial agencies taken into the body (for instance, medicaments and drugs) are at times absolutely necessary and that nothing else will produce the desired effects, it is equally obvious that external agencies under other circumstances furnish full equivalents. The question for the clinician is, How can most desirable effects be secured in any given instance by approaching the problem from both angles. This includes the inquiry of how to get the best results from both means of approach."

Having made therapeutics in all its branches a careful study for many years, I am fully convinced, from my study, observation, and experience, that the average regular physician has overlooked many, many excellent methods of treatment that have been utilized by so-called "irregu-

lars"—to the great advantage of patient no less than physician. If we were wise, we should carefully study these various efficient agencies and avail ourselves of any or all of them as occasion might demand.

"There is a reason," and, indeed, many reasons why the Osteopath, the Chiropractor, the Electrotherapist, the Hydrotherapist, and the Christian Scientist have thousands of followers who formerly, perhaps, consulted the old-school physician. It is needless and foolish to say that the people who have left us are all of them deluded and that all those who practice these various methods are charlatans. There are many elements of truth in every single one of these systems of cure. We no more have a monopoly on truth than we have of the sick people of this country. We did not discover every good drug or remedial measure, by any means, as you will find out—if you do not already know it—when you read the editorial under the heading, "To Whom Are We Indebted," that appears in the present issue of this journal (page 4).

I am not at all sure but that there has been more valuable progress in so-called "physiological therapeutics" and especially along the lines of psychotherapy (mental readjustment or reconstruction) during the past decade than has taken place in other therapeutic lines in the past twenty-five years.

There never was a truer statement uttered than this by Doctor Taylor: "A sick human being is something other than a living body afflicted with a damaged organ or disease-processes or their effects. The entire organism is thrown out of alinement. To relieve the malady, it is seldom enough to define just what and where the major phenomena are or how they are manifested, and to administer suitable medication and reassurance. The mind, always a prominent factor in human derangements, is contained in, and conditioned by, an essentially mechanophysical organism. The sick body is also an aggregation of biochemical structures and forces which have become perverted and require particularized regulation. It is likewise a human mechanism out of gear."

Within the past few years, we have been able, through a better understanding of diets and the action of certain medicines, to treat more successfully than ever before biliary lithiasis and diabetes. The employ-

ment, too, of alkalis and acids is now upon a very satisfactory and rational basis.

We are now able to treat fairly successfully uncinariasis, which for so long was unrecognized and neglected. In thymol, we have, perhaps, a specific for the hookworm.

In the control of hemorrhage, we have made remarkable strides since the introduction of subcutaneous and intravenous medication with such drugs as ergotin, adrenalin, and emetine, while, after hemorrhage or for combating shock and collapse of whatever origin, normal salt-solution has proved of the utmost benefit. Fischer's solution and lime-free purgative salines, two comparatively recent additions to our armamentarium, are very efficient in cases of albuminuria, uremia, edema, and arteriosclerosis.

The old drug-treatment of pulmonary tuberculosis by means of codliver-oil and cough-mixtures has been practically abandoned in favor of hygienic measures, such as rest, good food, fresh air, and other nonmedicinal measures.

The progress that has been made, within the past few years, in anesthesia, both local and general, has been almost phenomenal, as is well known by anyone who is at all conversant with medical literature.

The Blight of Therapeutic Nihilism

Under the influence of the German school and with the marvelous progress in diagnosis during the past twenty-five years, therapeutics fell to a very subordinate position, so that it became rather popular to be classed as a therapeutic nihilist, and, for a physician to attempt to treat symptoms and not causes would be sufficient grounds for the "authorities" to call him an ignoramus. But, I am glad to say that within the last few years therapeutics has come into its own and that there unquestionably is now an increasing interest in the subject.

"The real physician," said Broussais, "is the one who cures; the observation which does not teach the art of healing is not that of the physician, but, of the naturalist." As long ago as 1907, I wrote in *The Medical Record* that we should do more than classify diseases as a botanist might sort and classify plants and attach to them their proper names. We are dealing with human beings, not some dried specimens, which we label and place in their proper places in a herbarium; al-

though really I sometimes think that there are many ultrascientific physicians who would prefer to confirm their diagnosis by necropsy and preserve a few pathological specimens than to assist the patient to recover when the diagnosis happens to be in doubt.

I remember a story told by "Uncle" Allen, formerly president of Rush Medical College (Chicago). He was being shown through a large pathological laboratory in Paris and was wearily looking at shelf after shelf loaded with pickled specimens of organs and tissues from people long since dead. At last he turned to the great pathologist conducting him, and said: "Great God! Where are the people that you have cured?"

To prevent and cure disease, is the physician's actual business in life; and it is here that success is most to be desired. Our success is measured by our ability in this direction, for, the public cannot be expected to estimate us by any other measure than that of our usefulness. Even Doctor Osler, who is not much of a believer in therapeutics, says: "There is no one measure that can compare with the decrease of physical suffering in man, woman and child when stricken by disease or accident. This is the one fact of supreme personal import to every one of us. This is the Promethean gift of the century to man."

Let Not Your Patient Be a "Case"

We should not look upon each patient, when calling upon us for aid, as a "case," of interest only as a victim of some morbid process furnishing us an opportunity to demonstrate our diagnostic skill; but, rather, he should appeal to us as a suffering human being possessing the attributes of humanity collectively, together with some variations that form individual peculiarities, and who should be relieved if it be in our power to do so. Shall we be so "scientific" that we refuse to treat symptoms, because we may be unable to name the "disease," or because, say, the patient is suffering from pneumonia or some other acute, self-limiting disease, so called?

No less an authority than Dr. Oliver T. Osborne, professor of therapeutics in the medical department of Yale University, says: "Whether or not the lesion can be successfully treated, objectionable or disturbing symptoms must be stopped or ameliorated. No one but the consultant and

text-books can refuse to treat symptoms; the practicing physician must, and should, treat the symptoms. The banal phrase of "symptomatic treatment," pointed at with the finger of scorn, must now be recognized as of great importance under the new name of the "necessary treatment of symptoms."

Pain cannot and must not be suffered, lest cardiac depression and exhaustion occur. High prolonged fever must be reduced, but, not every slightly elevated temperature. Too high blood pressure must be combated, and circulatory failure must be guarded against, and combated when present. Almost every acute disease will cease, and the patient will recover, provided we can sustain his heart. It is the heart-age. The heart fails, and the patient dies even before we have got well into our fight against disease. We have come from the bleeding-, "vomiting-" starving age, through the aconite and alcohol-ages, to the feeding and strychnine-age. All this showing the "change of heart," both in ourselves and in our patients. Now, too much strychnine is being given.

Students are not sufficiently taught, while the practitioner does not often enough consider the disturbances of function due to, or caused by, the disease that is present. Medical students are so engrossed in the pathology, differential diagnosis prognosis, and specific treatment, if there is any, as to get the whole idea of the subject under the caption of "the disease," instead of under the caption of "the patient who has the disease." Hence, the patient himself and his disturbed physiology or disturbed functions are forgotten—to his detriment. Just what functions may be disturbed depends, of course, upon the disease, the lesion, and the prominent symptoms; however, it is an axiom that disturbances will occur, and they should be corrected, if possible.

The life processes must go on in illness as they do in health, nutrition must be kept up, excretion must occur, repair by sleep must take place, and the organs concerned in these life processes must be coaxed into the greatest efficiency possible, with the handicap that they are continuous.

It rarely is possible to destroy the cause of disease. In the majority of diseases, perhaps, it is impossible to overcome or remove the cause; nevertheless, we can counterbalance many of the primary effects. For example, since we are unable to dissolve urinary calculus, we must endeavor

to annul the spasm and the pain occasioned by the presence of the stone, and also, by proper diet and therapy do something, not against the concretion itself, but, for removal of the causes that have made it to form. Although we cannot make new heart-valves out of imperfect ones, nor but rarely restore a degenerated heart-muscle, we can, by proper treatment, relieve the symptoms resulting from failing compensation.

We often see certain symptoms accompanied by certain others, and we observe, in general, a constant succession in certain groups of symptoms. Disease is nothing but a new manner of being in the organs, which present either new phenomena or different modalities of normal ones. Herein lies the difference between clinical medicine and pathology; the latter shows us the species and genera of disease; the former compels us to bear in mind that it is not a disease, but, a diseased person with whom we have to do.

The morbid phenomena determined by numerous and different conditions vary unceasingly, according to the varying combinations of these conditions; consequently, it is impossible to refer disease-conditions to certain types that are invariable and uniform. If all individuals had organs constituted in the same manner, if all were endowed with the same dynamic energy, if climatic conditions were the same for all, and if all could be subjected to the same psychophysical life, the same perturbation would then produce the same effects in all, and in the same invariable order of succession. In such a case, there would be as many diseases as there are varieties of initial perturbations, and they could be classified as one classifies chemical reactions.

Disease is made up of morbid symptoms and effects. But, the relation of causality and dependence that unites these elements often requires that a system of treatment should take cognizance principally of symptoms, not so much on account of the value of the symptom in itself as on account of the symptoms which depend upon it, and the morbid effects which it may produce.

Every symptom represents a constituent element of disease, but, all symptoms have not the same hierarchical value and do not all deserve to be placed in the class of morbid elements. In annulling a symptom, one does not confine himself to destroying its

effects and simplifying the morbid conditions; for, by this means, many others can be avoided, when they would naturally and physiologically follow from the existence of the one that was to be suppressed. Symptomatic therapeutics, therefore, in my opinion, not only is curative of a portion of the disease, but, besides, preventive of ulterior morbid phenomena, complications and aggravations.

Find the Cause—But, Relieve the Sufferer

If we are called to treat a sick person, our first thought should be, to discover the cause of the disease. That cause, when discovered, either will still be in existence or will have passed away. If it still exists, we must do our best to destroy it, to neutralize it or to prevent its obvious results. If the original cause has disappeared or if it is not amenable to treatment, we may operate upon it; but, we can and should direct our efforts upon its results. These results may be primary, secondary, tertiary, et cetera, and it will be our duty to fight them, choosing for particular attention those which are the most grave, the most perturbant and the most insupportable.

By means of drugs alone, we can cause to be restored some of the normal constituents of the blood when they are deficient; we can remove abnormal substances present in the blood, and, if we have reason to suppose that the products of imperfect metabolism are present, we can greatly facilitate their excretion by the kidneys and bowels. We can antagonize and destroy the effects of certain toxic matters that cause disease. We can mitigate or limit both external and internal inflammations. We can act, for example, upon the inflamed mucous membrane of the bladder, by sedatives or stimulating germicidal substances; we can also influence the lining membrane of the tubes of an inflamed kidney. We can increase secretion in the neighborhood of an inflamed part, and can alter the general tension of the vascular system. The local vascular condition can be modified by dilating vessels in adjacent parts, and we can exercise a sedative influence upon the mechanical conditions affecting an inflamed part. It is thus that morphine is employed in peritonitis.

The products of ordinary inflammation that interfere with the functions of tissues may, when consisting of cell-growths, be broken up and absorbed under the influence

of mercury and potassium iodide, as the products of syphilitic inflammation certainly are. There is reason to believe, also, that we can cause the absorption of inflammatory deposits by stimulating the nerve endings in adjacent areas. Arsenic can be shown to have a very decided effect upon the nutrition of the skin, and it often distinctly influences inflammatory deposits therein.

Chloral, atropine, physostigmine, strychnine and several other drugs act upon the tissues of certain parts of the brain and spinal cord and thereby increase or decrease the functions of these parts. We can depress the functions of the motor-nerve-endings with coniine, and the sensory nerve-endings with aconitine. We can paralyze the involuntary muscle fibers directly with the nitrites or indirectly with chloral hydrate, drugs which depress the functions of the vasomotor center. In valvular affections of the heart we can not remove the chief pathological condition, but, by acting upon the cardiac muscle and its ganglia, we can so strengthen and moderate the beat as practically to restore its normal function. We can stim-

ulate or depress the tissues of the various glands. We can improve the nutrition and, therefore, the function of almost all tissues.

In closing, let me add, briefly, that, despite the many radical changes that have taken place in medical practice since I entered it, I am thankful for my early faith in doctors and in their medicines; and, although many of my idols have been shattered, and I am, perhaps, in possession of more truth, more knowledge, I nevertheless should delight to go back, for a little while at least, to the days when I roamed the woods with my grandmother, gathering medicinal plants, away from the hustle and bustle, competition and skepticism of the present day. For all that, I know full well that this is an age of progress, and in my mature manhood I look back upon the dreams of youth, and they seem bloated with infancy. They appear to be without sinew or bone, and I am forced to say with Froude:

"In every department of life—in its business and in its pleasures, in its beliefs and in its theories, in its material developments and in its spiritual connections—we thank God that we are not like our fathers."

"Before It Happens"

By SOLOMON SOLIS COHEN, M. D., Philadelphia, Pennsylvania

THE lawyers have a phrase: "*Time is of the essence of the contract.*" Doctors also should realize and take to heart the fact underlying these words.

Abraham Jacobi says: "*The time to treat heart failure is, before it happens.*"

J. Solis Cohen said in the preantitoxin, preincubation days, when tracheotomy was practiced for laryngeal diphtheria and membranous croup: "*The time to open the trachea is, when you begin to think that perhaps it may become necessary.*"

I have permitted myself to say concerning the use of oxygen in pneumonia: "*It will not revive the dead.*"

The disappointment experienced by many practitioners in the use of remedial measures lauded by others is often owing to the neglect of the factor of *timeliness*. If I may again quote myself: "I have a robust faith in the efficacy of the *right drug*, given to the *right person* in the *right dose*, at the

right time. But, I have no such faith in drugs given after the right time has passed. It is of time only that I am now writing—I assume the choice of drug and dose to be appropriate to the individual case.

What is true of drugs is true of all other remedial measures—physical or psychical, medical or surgical.

This fact was forcibly illustrated in my service at a certain hospital, recently. A burly Negro was admitted with an "apparently mild" case of lobar pneumonia. In regard to these "apparently mild" cases, there is much to be said. I'll only digress now so far as to say, Don't be deceived by them. The patient exhibited evidences of arteriosclerosis and of mitral stenosis.

Doctor R. Cabot, of Boston, believes that mitral stenosis frequently is unrecognized. This may be true of Boston. But, even there, if more attention were paid to the

jerky action of the heart, to the disproportion between cardiac effort and pulse result, and to the tactile characteristics of the poorly filled artery with its relatively slight excursion and relatively rapid beat, then cases might not be missed so often. This, however, is an "aside."

In the case here spoken of, the interne was instructed to watch the patient closely for evidences of *impending dilatation of the right heart*, and to bleed *at once*. (Incidentally, let me say that the mortality in hospital cases of pneumonia often bears an inverse ratio to the vigilance of the interne on duty—a factor that statistics can never exhibit.) This interne is an alert, quick-witted, observant young man. He called me on the telephone late that night, to tell me that our patient had suddenly become much worse: the respiration approaching 60; the pulse reaching 140; the systolic pressure being 120; the diastolic pressure 80; and small moist râles appearing over both bases. "Bleed," I replied. "I've done it!" was the answer. "I took 12 ounces. The pulse has fallen to 120, the pressure has gone up to 126, the respirations are only 30, and the râles are diminishing. However, I wanted your approval, in case anything goes wrong. *I called you before; you were not at home, though.*"

The next day, the pulse rate had again increased, but only to 136, the pressure remaining at 126, while the respirations remained at 30. The general symptoms were less urgent. At this writing the man still

has to go through several days of doubt and struggle. I cannot predict with certainty his recovery. At all events, though, he is *not dead of pulmonary edema*, as he might have been, and in all probability would be, without the *timely* bleeding on the night following his admission. To have waited for my routine visit the next morning, or even to have waited until I could be gotten on the telephone—which proved to be three hours after the first call—would have been to let the *opportune moment* pass. A later bleeding having failed, the treatment would have been discredited in the minds of my interne and of his colleagues. As it is, every one of the bright young fellows in that hospital has received an object lesson, the utility of which will not be impaired, even should our patient fail to weather the infection and to recover from his malady.

For, the bleeding was *not, to cure pneumonia*, but, *to avert heart failure*, and consequent *death by intrapulmonary drowning*. *And this is accomplished.*

I do not dwell upon the other features of treatment—quinine dihydrobromide, posterior pituitary preparations, digitalis, oxygen, all used according to indications—because the object of this communication is merely, to emphasize the necessity of *doing in time whatever is to be done*. I have thought that I could make no more useful contribution to the anniversary number of the journal. The gist of the whole matter is: "*Do It Now!*"

THIS IS MY DUTY

*To use what gifts I have as best I may;
To help some weaker brothers where I can;
To be as blameless at the close of day
As when the duties of the day began;
To do without complaint what must be done;
To grant my rival all that may be just;
To win through kindness all that may be won;
To fight with knightly valor when I must.*

—By S. E. Kizer.

A Quarter of a Century of Obstetrics

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

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Asepsis

WHILE obstetrics has, perhaps, not made such striking and spectacular strides in the past twenty-five years as has surgery, it, nevertheless, shows a record of progress that is healthy and satisfactory. If we go back a third of a century, the contrast with present-day conditions is more striking, for, that takes us back to the introduction of asepsis and antisepsis. It was my good fortune to enter the profession just as this change was taking place. It is not easy for the doctor who has been graduated in recent years to picture to himself the conditions of thirty-three years ago. In those days, most doctors washed their hands *after* an obstetric examination, instead of *before*. Every now and then, some family-doctor would have an epidemic of puerperal fever among his lying-in women, and sometimes he even would abandon all obstetric work until the thing had blown over. In a vague way, it was believed that somehow the doctor carried the contagion, while by many it was thought that the clothes were the vehicle. After relegating his obstetric work to his confrères for some weeks, he eventually would resume it, when, if he was lucky, all would be well again, until the next epidemic supervened.

Twenty-five years ago, the idea and practice of asepsis had been pretty generally established, although the technic still was in many respects faulty. In the working-out of any new idea, it is inevitable that mistakes should be made. Great stress often is put upon an unimportant point, while matters of real importance are overlooked; and, in this respect the adoption of asepsis in obstetrics was no exception to the rule.

At first, the idea took the form of antisepsis rather than asepsis. Patients were doused with powerful antiseptics before labor, during labor, and after labor; and even during convalescence they were given no respite from the everlasting germicide douche. It was in vain that some of us raised a voice of protest, that we pointed

out the fact that nature does some things in the way of protection herself, and that surgically clean hands and instruments were of more consequence than the douche-bag.

There always are radicals who insist upon carrying to extravagant lengths every new idea that comes their way, and they do not hesitate to denounce as "old fogies" the cooler heads who refuse to follow their lead. We see this in every department of medicine. New procedures are constantly coming into vogue, for a time are lauded to the skies, and then either go to the scrap-heap or are greatly modified, and in the end what they contain of good becomes a part of practical science. This process of sifting out a few grains of wheat from bushels of chaff is, probably, inevitable while human nature remains constituted as it is; however, there is one harm that the cause of scientific medicine suffers from these lightheaded radicals, this "lunatic fringe" of the profession, who carry every new idea to an extreme: that is, that the whole profession suffers in the eyes of the laity, who come to sneer when they see a procedure condemned which a short time before was praised sky-high. The people then assert that medicine can not possibly be a science when such contradictory things occur. They do not understand that the whole profession can not fairly be held responsible for the vagaries of a few.

To proceed: Gradually the principles of asepsis have been applied more and more intelligently, so that today the parturient woman is pretty safe from all danger of infection.

The Fear of Vaginal Examinations

Of late years, it has been taught in certain quarters that vaginal examinations in labor should be abolished altogether, and that as complete information as to diagnosis and progress can be obtained by external examination. This idea has not found much favor with the rank and file of the profession. The difficulties and uncertainties of the method would expose the patient to greater dangers than will the

trifling risk of vaginal examinations, which under strict asepsis are as safe as any surgical procedure can be. Without the information obtained by vaginal examination, the obstetrician most assuredly is hampered by more or less uncertainty as to diagnosis and progress, a few enthusiasts to the contrary notwithstanding.

This unreasoning fear of introducing the hand into the birth canal during labor causes risk to the patient in other ways, also. Because of it, some doctors are afraid to ascertain whether fragments of placenta or large clots are retained in the uterus, and so, postpartum hemorrhages occur needlessly. When they do occur, some are afraid to undertake the one prompt and effective means of stopping the bleeding, namely, to introduce the hand, clean out the uterus, and insure contraction by friction of the mucous membrane with the finger-tips.

The correction of faulty presentations and positions by internal manipulation, especially the correction of occipitoposterior positions, affords another example of disregarding the minor risks of producing infection for the purpose of avoiding greater dangers.

This fear of conveying infection with the hand was a natural reaction against the careless methods of the preaseptic period, but, with the thorough methods of today for securing clean hands and instruments, the danger is practically nil. In my last thousand deliveries (probably more), I have made it a routine practice to assure myself, by exploration with the finger-tips, that no fragment of placenta was left in the uterus, and, yet, there have occurred no infections worth speaking of.

With such an experience, is it any wonder that the fear of making vaginal examinations seems to me so trivial as to be amusing? Is it not a good deal like the fear of the woman who refuses to go downtown, because she is afraid to cross a congested business street?

Cesarean Section

Owing to the introduction of aseptic surgery, the cesarean operation is today performed much oftener than it was twenty-five years ago, and with a comparatively low mortality rate. So good have been the results, that it is a question whether it might not be employed still more frequently

than it is. There are difficult forceps-deliveries where the dangers both to mother and child are greater than they would be from cesarean section done early and while the mother yet is in good condition.

This operation also has been suggested, and to some extent practiced, in placenta prævia and in puerperal eclampsia. Judging from recent literature upon the subject, it would seem that the question still is unsettled as to whether the dangers of these two conditions are diminished or not by cesarean section. A sufficient number of cases has not been reported to settle the mortality rate under this new procedure. In eclampsia, at least, I should be inclined to doubt any advantage in the operation, not only because emptying the uterus does not always stop the convulsions, but, because in many instances they do not begin until after the delivery. Then, too, *veratrum viride* affords a means of control that seldom fails.

Pituitary Extracts

The discovery of the influence of the pituitary secretion on the uterine muscle is pituitary gland on the uterine muscle is one of the noteworthy events of the last quarter century. It produces contraction of the uterine muscle, although in a manner somewhat different from ergot. The latter acts mainly in the way of producing tonic contraction, while pituitary extract increases the frequency and force of the ordinary labor-pains. Like ergot, it is capable of doing mischief if given too freely or indiscriminately. There is no lack of evidence that the rapid delivery of the child, when induced by large doses, increases the danger of laceration of the perineum. If given when any obstacle to delivery exists, rupture of the uterus is a possibility. Pituitrin acts more decidedly in some patients than in others, and for this reason there always is a possibility of getting excessive contractions. This uncertainty has led me to use it less frequently of late. When a little extra force is needed for effecting delivery, I prefer to supply this by means of the forceps, the action of which I can control, rather than use a drug the action of which, when once it is administered, is beyond control. Still, there is no denying that where the pains are feeble and ineffective the action of pituitary extract often is brilliantly satisfactory. As a means of securing

and maintaining postpartum contraction, it is inferior to ergot.

Painless Labor

The problem of mitigating the sufferings of parturition has received considerable attention of late years. The solution of the problem was believed, by many, to have been reached about five years ago, when the much-vaunted "twilight sleep" was announced, to a waiting world, from Freiburg. This consisted in the combined use of morphine and scopolamine (or hyoscine) to the extent of producing complete anesthesia, or, rather, amnesia. The method was given a trial more or less thorough both in Europe and America; however, it has been pretty generally abandoned or else considerably modified.

Long before the sensational announcement from Freiburg, many of us had been using the Abbot combination of hyoscine, morphine, and cactin (known familiarly as H-M-C). I regard this as more satisfactory and safer than the complete unconsciousness of the so-called twilight sleep. So far as I can observe, there is no extensive demand on the part of childbearing women for absolutely painless labor. All that the great majority ask is, that suffering be relieved to a reasonable degree. And this can be accomplished by means of this mixture with perfect safety even in domestic practice. The close and constant supervision required in twilight sleep makes it impracticable for use anywhere except in hospital work. I have used the hyoscine-morphine combination for a little over ten years and find it very satisfactory.

The use of nitrous-oxide gas for rendering labor painless or nearly so has been tried to some extent. The results have been good, although the method is impracticable in family work, however well it may be adapted to hospital practice. It requires heavy apparatus and is expensive.

Puerperal Eclampsia

Some progress in the prevention and control of puerperal eclampsia has been made, although the work of the profession in general in this respect still leaves much to be

desired. The value of digitalis for controlling the albuminuria of pregnancy and of veratrum viride for controlling eclampsia is not as generally known as it should be. These two drugs are apt to be used too timidly to give the good results of which they are capable. With the general adoption of an intelligent use of veratrum viride and digitalis, there would be few cases of eclampsia, and fewer still would end fatally.

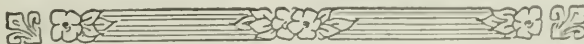
The Pulmotor

The invention of the pulmotor was hailed by many as a lifesaver in asphyxia neonatorum; however, its use virtually is limited to hospital work, and even there it is a question whether it has any advantage over the old method of mouth-to-mouth insufflation. The great advantage of the latter is, that it can be applied instantly and requires no apparatus. This is very important when we bear in mind that a few seconds may make the difference between life and death.

The same objection holds against the attempt to aspirate mucus from the trachea by means of a catheter. It loses valuable time. Anyone who has ever tried to intubate the larynx in diphtheria knows how difficult it is to get into the rima glottidis. And, the procedure is not needed. If a newborn child fails to breathe, it is not because the trachea is filled with mucus, but, because the reflexes are suspended; and the pressing need is, to excite those reflexes as quickly as possible. To do this, the child should be held head down for a moment, its pharynx wiped out with a gauze-covered finger, and the insufflation applied steadily and persistently. This will revive any child not absolutely dead.

Summary

Most of the standard obstetric procedures twenty-five years ago are in use today but little modification. Our fathers have fared well. They were conservative and their work has stood the test of time. The greatest need of today is, an intelligent conservatism free from bigotry, yet, progressive without being radical.



The More Recent Conceptions of Narcotic-Drug Addiction

By W. R. WALLACE, M. D., Memphis, Tennessee

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DURING the twenty-five years in which CLINICAL MEDICINE has been preaching the doctrine of rational therapeutics, most radical changes have occurred in professional opinion with reference to narcotic-drug addiction. Prior and up to 1901, narcotic addiction was classified either as a neurosis having some mysterious and undemonstrable nerve lesion as its pathology or was held to be a mere habit, a vice, a moral perversion, and without any pathologic foundation. These views were widely promulgated and universally accepted, and are still adhered to by certain classes of physicians, although the large majority have accepted the more recent, more rational, explanation.

Those who held that there was present some structural pathology, which, when discovered, would account for the manifestations incident to the habitual use, as well as the disuse, of narcotic drugs, strove in vain to find such a lesion. Being unable to prove its existence, they advised symptomatic treatment and, as a rule, made the prognosis unfavorable.

Those who classed narcotic addiction as a mere habit, a vice, a moral perversion advised either the immediate or the rapid withdrawal of the drug, in connection with complete restraint of the patient; since, however, these means usually failed to cure, they held out no hope for the restoration ("reformation", as they called it) of the victim of those enslaving drugs.

Eventually, in the year 1899, Dr. Geo. E. Pettet, being convinced that the currently held view of drug-addiction was erroneous, undertook an independent clinical study of this class of patients; and the result of this investigation, based upon the treatment of 150 cases, he published in *The Therapeutic Gazette* for October, 1901.

The conclusion reached by Doctor Pettet was, that narcotic addiction is neither a mere habit, a neurosis nor a vice, but, that the person thus addicted is suffering from a real disease—not one, indeed, depending

upon a structural pathology, yet, a disease, nevertheless; that, in fact, it is an intense and complex toxemia. And experience soon led him to announce that narcotic addiction is the most certainly and most readily curable of all the chronic ailments. In the *Gazette* article referred to, Doctor Pettet not only announced the pathology of drug-addiction, but, gave the profession an outline of treatment constituting a rational basis for handling such cases. Thus, for instance, he wrote:

"While it is true that many nervous manifestations attend the use of narcotics, and especially the disuse of narcotics, by one habituated to their use, still, the condition is not in any sense a true neurosis, but, is purely and solely a toxemia, and, as such, it belongs to the field of internal medicine, and not to neurology". And he reached the conclusion that "the essential pathology of narcotic addiction is, a toxemia of drug-, auto-, and intestinal origin", and he announced his belief that, "if the patient could be made *cell-clean*, that is, if every cell and tissue of the body could be entirely freed from toxic matter, there would be no nervous manifestations or suffering incident to or following the withdrawal of narcotics from a habitué." He admits, that "it is impossible to cleanse perfectly the system of a drug-user, so long as any quantity of the drug is taken", but, adds that "the nearer this ideal condition is approached, the less suffering accompanies or follows the withdrawal of the opiate".

Having reached these conclusions as to the proper classification and the pathology of narcotic addiction, Doctor Pettet announces the principles involved in his new treatment, as follows:

Doctor Pettet's Principles Restated

"At least six of the most troublesome and dangerous complicating symptoms [of drug withdrawal] have their origin in a perverted function, namely, deficient excretion. These are, intestinal colic, nausea, vomiting, la-

bored and deficient heart action, and collapse. By thorough elimination, these may be prevented altogether, and a number of the other symptoms of nervous and mental origin greatly modified, if not avoided.

"The motor function of the bowel is the function most impaired by the effects of opiates. Purgatives, secretory stimulants, as ordinarily given, which excite intestinal motion by reflex action, do not sufficiently restore that function to bring about effective emptying of the intestinal canal of a drug-user.

"In order to empty the intestinal canal of a drug-user direct, positive stimulation of the motor centers is essential, strychnine being the most suitable agent for this purpose. Since in narcotic drug-users all the nerve-centers are profoundly impressed with the narcotic, resulting in extreme lethargy of intestinal motion, larger than ordinary medicinal doses of strychnine are required to overcome this lethargic state and excite efficient peristalsis.

If the motor activity of the bowel be efficiently induced and maintained by direct stimulation of the motor centers with strychnine, no larger quantity of the glandular stimulants is required promptly and fully to empty the intestines of the drug-user than in those not using the drug.

"If free peristaltic action is excited while the system is still under the sedative influence of morphine, little, if any, distress occurs and the intestinal canal can be thoroughly and promptly emptied. Strychnine, if given in sufficient doses, will excite active peristalsis, notwithstanding the restraining effects of the opium.

"When the intestinal canal has been thoroughly cleansed and portal engorgement overcome, morphine or other narcotics can be at once withdrawn from an habitué, without danger to life and without the occurrence of shock, diarrhea, colic, vomiting or the slightest appearance of collapse. By uniform and proportionate stimulation of all of the functions concerned in the evacuation of waste, the system can be thoroughly cleansed of toxic matter without exhausting the patient's strength or otherwise taxing his vital energy.

"A general hyperesthesia follows the withdrawal of opiates from an habitué, this being the natural reaction from the state of chronic anesthesia to which the drug-

user has been accustomed. This extends to all of the functions of the body, mental as well as physical.

"The severe suffering incident to the abrupt withdrawal of opiates, after thorough elimination has been carried out, has a natural limit of a few days' time. This suffering, severe as otherwise it would be, can be obviated and these days passed in comfort by the discreet administration of scopolamine.

"The therapeutic use of scopolamine, for the time it is required in these cases, does not in any way perpetuate the desire or necessity for the use of an opiate. While it relieves pain, induces sleep, and overcomes those distressing symptoms of nervous origin that follow the withdrawal of morphine, its action so opposes the effects of the opiate that, instead of perpetuating the effects of the morphine, it stimulates the centers which have been benumbed by that drug and shortens the time during which its secondary effects would be manifested.

"When the patient's system has been thoroughly cleansed from toxic matter, the drug withdrawn, and the patient prevented from suffering, by means of scopolamine, for from two to three days, no craving or desire for the drug remains; abstinence-symptoms such as ordinarily follow the withdrawal of opiates are obviated, and the patient is brought to a condition in which he can pass his time in comfort, eat heartily, and sleep from four to six hours out of each twenty-four; and this insures safe and rapid convalescence.

"The period of convalescence during which the patient must be kept under supervision also is considerably reduced, although it varies greatly in different individuals. The absence of that train of nervous symptoms, the ability to sleep naturally and to eat heartily, and the improved digestion and assimilation, by which the patient rapidly gains in flesh and strength, lessen the liability to relapse almost as greatly as this curative plan of treatment lessens the dangers and sufferings while under treatment."

Petty's Position Is Sustained

These findings of Petty have been confirmed by Jones¹, Crowell², McKay³, Case⁴, Bishop⁵, besides other investigators, and his writings have been extensively quoted. In

1913, The F. A. Davis Company, of Philadelphia, published his complete work, under the title "The Narcotic-Drug Diseases and Allied Ailments," to which reference here is made.

During the past twelve years, the writer has treated about 3,000 cases of drug-addiction according to the principles outlined by Pettey and has fully confirmed the findings of that investigator.

In November, of 1901, Lott⁶ published an article entitled the "Cure of the Drug-Habit Without Pain," in which he advocated the free administration of hyoscine, which he styled a specific cure for morphinism. Hare⁷, following Lott's teachings, reported on the treatment of 6 cases of narcotic addiction with what he called "remarkable results." The endorsement of Lott's method by Hare and his advocacy of the use of hyoscine, which, he said, could be used in massive doses for days at a time without harm, led many to undertake the treatment of drug-addicts by what soon became known as the "hyoscine-treatment"; but, the excessive and indiscreet use of this remedy soon brought that treatment into disrepute, and it is now practically obsolete. It was based upon a false idea as to the nature of addiction, and, since it did not remove, correct or overcome the pathology, the patient was in as bad, if not worse, condition after the treatment than he was before it was begun.

A Criticism of the Towns-Lambert Method

In 1909, Lambert⁸, published an article entitled "Obliteration of Craving for Narcotics," in which he announced the discovery, by a layman, of what he termed a "specific" for the cure of drug-addiction. The composition of this "Towns-Lambert" remedy is as follows:

Tincture of belladonna	
(old formula)	2 drams
Fluid extract of hyoscyamus.....	1 dram
Fluid extract of xanthoxylon.....	1 dram

The initial dose of this mixture is given as from 6 to 8 drops, repeated at intervals of one hour, and to be increased by 2 drops every six hours, until the maximum of 16 drops is reached. This course is to be begun as soon as the bowels have acted from a dose of compound cathartic pills and blue mass previously taken. The remedy is to be continued, and the cathartic to be re-

peated at frequent intervals until a liquid green stool, composed of bile and mucus, occurs, which is the signal for discontinuing the treatment.

In the series of 28 cases reported by Doctor Lambert, the average length of stay in the hospital was eleven days. While these patients were discharged as cured, no one who knows what is involved in the cure of a drug-addict would consider them cured. Doctor Lambert's high professional standing led many to give weight to his announcement of this new treatment and to employ it in the treatment of their drug-patients; however, the results were very disappointing. These unfavorable results, together with the fact that a few months later virtually the same article by the same author appeared in a popular magazine, soon led the profession to become suspicious and to drop this treatment, not, however, until much harm had been done to the helpless victims of narcotics.

Federal and State Laws

In the matter of legislation for restricting the sale of narcotics, it can be said that much good as well as much harm has resulted from these laws. The federal law, known as the Harrison Law, has greatly reduced the sale and use of narcotics; but, it also has sent many of these victims to an untimely grave. This law was molded by those who held narcotic addiction to be a vice rather than a disease, and its provisions cut off the drug supply from persons addicted without making provision for the treatment and cure of these really disease-stricken people. As a result, many of them went into collapse from being deprived of their accustomed drug, and from this to an untimely grave. The purpose of this act was, to control, restrict, and finally abolish the abuse of narcotics. While it has done much to accomplish this result, this heroic measure, so destructive to life, can not be justified.

Most of the states have passed laws for the control of the sale of narcotics and for the restriction of their use, but, New York seems to be the only one that has in its laws recognized narcotic addiction as a disease and provided for the care and treatment of those victims before they are deprived of their needed drug.

Following the teachings of Pettey and Bishop, the state of New York has passed

real 20th-century laws for governing the prescribing, sale, dispensing, and use of narcotics, as well as for the care and treatment of persons addicted to such drugs. It is to be hoped that other states will follow the lead of New York, and that no laws will hereafter be passed that deprive a narcotic habitué of the drug of his addiction, without recognizing the fact that he is suffering from a real disease, and without providing for the humane care and treatment of such persons.

Narcotic addiction is a curable disease,

and, when once the patient is really cured, when he is given a fair chance, his permanent restoration is fairly certain.

¹J. Ben Jones, *American Medicine*, Vol. 4.

²S. M. Crowell, *Charlotte Medical Journal*. *Virginia Medical Monthly*.

³Jno. H. McKay, *Denver Medical Times*, March, 1908. *Texas Medical News*, August, 1912.

⁴C. L. Case, M. D., *Medical World*, 1909.

⁵Earnest S. Bishop, *New York Medical Journal*, *American Medicine*, *American Journal of Surgery*, *Interstate Medical Journal*, 1914, 1915, 1916.

⁶M. D. Lott, *Therapeutic Gazette*, November, 1901.

⁷Hobart A. Hare, *Medical News*, 1902.

⁸Alexander Lambert, *Journal American Medical Association*, September 25, 1909.

The Third Arm

A Study of Pathological Tissues

By B. G. R. WILLIAMS, Paris, Illinois

EDITORIAL COMMENT.—This is the third article by Doctor Williams concerning the possibilities of laboratory investigations as a fertile aid to diagnosis. The preceding papers were published in the issues for August and October of last year

SURGEON Sampson believes in routine tissue studies, and he sees to it that they are carried out in all of his excised tissues, Surgeon Simpson does not.

Many surgeons are now insisting upon routine histological studies of their material; and thus they are able to check up their clinical diagnoses and complete their records.

These data are of great value, not alone in avoiding possible legal troubles, but, in making these surgeons clever diagnosticians.

Often—usually—the report will coincide with the clinical opinion ventured. But, it does occasionally happen that the pathologist will find a condition not suspected by the surgeon. Daily verifications and challenges of diagnostic opinion prove of greater worth than the haphazard method of concluding with, "Oh, well, this tissue apparently is tuberculous," (or whatever it be), and then throwing it away and following up the matter no further.

We all start even; and our fitness to practice medicine is determined by fixed standards. Diplomas all look about the same and do not vary in weight. But, after ten or twenty years, the fact becomes apparent, that, while some of us have succeeded, others have succeeded only in failing. Even the layman—and surely, the general practitioner who refers his surgical

work to specialists—may distinguish between the surgeon and the operator.

It is an observation that the man who truly succeeds is he who is persistently progressive. It is a fact that the man who calls upon the precise aids of medicine succeeds. It certainly is not true that laboratory-work alone will insure success, still, it is one of those contributing factors in the making of a great diagnostician. For, the successful physician no longer is the purveyor of pills or the expert manipulator of the scalpel, but, he who understands pathology. And it is becoming so more and more.

Surgical pathology has made surgery. The examination of excised anatomical material has contributed more to medicine than has the necropsy. Irrespective of his duty to the patient, the surgeon owes it to himself and his future to be persistently progressive.

Preparing the Specimen

The average tissue-pathologist is a prohibitionist. As a tissue-preservative, formalin has replaced alcohol. A 10-per-cent formalin solution is a powerful and beautiful fixing agent; while alcohol dissolves out the contents of the red blood-cells, renders some tissue-elements less distinct, and leads to stained pictures that are not nearly so clear and definite as

those given by formalin. Moreover, tissues should never be submitted to the pathologist in salt solution, carbolic acid, boric acid, iodine, lysol, mercury bichloride, and so on; and, when submitted without proper preservation, they dry out or rot.

Very large pieces of tissue may be incised here and there (carefully so that relations be not lost); and this will aid in the formalin penetration and thus the work of the pathologist is hastened.

Selecting the Specimen

Avoid clots, sloughs, caseated areas, and such, as these are structureless, unstainable, and can not be examined with diagnostic profit. Solid living tissue should be secured, if possible. A tissue need not be normal to be living; tumors, inflammations, and so one are all living processes, and by virtue of this fact can be diagnosed by the tissue-man. Dry, stringy, friable or cheesy materials easily separated from a lesion are, as a rule, quite structureless, and the pathologist cannot even guess what the process leading to their death "may have been."

Excise the specimen from the more solid portions of the lesion. When possible, it is well to include the line of transition between tissue apparently normal and that diseased. This applies especially to tumors, as thus the pathologist is able to demonstrate malignant infiltration, if such be present.

If specimens are to be sent to two pathologists, give each a fair share. Do not send one a portion of normal tissue and the other some material that manifestly is pathological, or else their reports can not be expected to agree.

Instructions

It is not always necessary, but, often is advisable to include with the specimen a record of the source of the tissue (site of lesion), as also the tentative diagnosis. Many surgeons believe that this will influence the judgment and opinion of the pathologist. It will not, for, the latter is always on the alert to challenge a clinical diagnosis. This is the modern spirit of diagnosis; it also is seen in the policy and habit of the prosector (another true pathologist), who is ever ready to find something the clinician did not suspect.

At any rate, it is always well to include information as to the site of the lesion. A

certain growth which may be normal or only semipathological in one portion of the anatomy would be strictly malignant found elsewhere in the body. I could give many instances, but, will mention especially thyroid tissue in some portion of the body other than the thyroid region, and polyps in the external auditory canal rather than in some other site.

Mammary and Uterine Tumors

Malignant tumors of the skin, lips, tongue, etcetera, all have about the same appearance under the microscope; this, though, is not true for cancers of the breast and womb. This fact is important, although the practitioner will not be interested in the technical variations. It does argue, however, that the man who merely sees a few cancers from these organs and memorizes their microscopic appearance will not get very far in differentiating malignant and benign growths of the mammary gland and uterus. This applies more or less to neoplasms in all of the viscera, where decision must be made, not upon classical appearances, as presented in texts or the teaching-laboratory, but, upon proving vegetative properties of the cells, invasive designs, and other facts, which often necessitate considerable study, even by an experienced laboratory-man. I recall certain types of cancer in these organs, observed by me several years ago and indelibly impressed upon my mind, for which I have been on the lookout ever since, without ever having met them again. Others have resembled them, still, there was no exact duplication. There always was some important variation either in the type of the cell or in the general scheme of the growth.

Some time ago I looked over some sections of mammary gland given to a student in his medical course, and among them I found several that varied considerably in detail from any I had ever observed although I have examined many hundreds during the past years. This point is rarely taken into consideration; and the surgeon often fails to realize that in every case the question of malignancy must be solved, not by reference to classical pictures, but, by a searching study into the type and relations of the suspected elements. There are some general classifications that are of some value, but, there are perhaps

thousands of possible varieties of mammary carcinoma.

The same is true with reference to uterine cancers, and I have studied several types of stratified squamous-cell carcinomas of the cervix, a type ordinarily regarded as showing little variation. However, the greater variation occurs in the so-called cubic-cell types, in the adenocarcinomas, and in the malignant adenomas—certainly, there must be hundreds of types, and the resemblance is not close. Formerly I saved these specimens, and it occurred to me to mount some of them alongside of sections of normal uterine tissue and sell them to other pathologists as contrast reference mounts. But, the method was a failure. It would have been as plausible to have photographed a well person and one having typhoid fever, and mounted them on the same cardboard and said: "Here is a normal person and a typhoid-case. If in the future you are called upon to make a diagnosis, merely refer to this card, and the question will be solved." For, while the pictures could be contrasted and were very interesting, a survey of my collection showed that I might actually mount dozens of types of uterine cancer, all of which were classical enough, and *yet the next cancer met by the pathologist using the mount might hardly resemble any of the sections*. I abandoned the scheme, although I, a tissue-man, and at least three others, upon first thought had regarded it as a brilliant one. *The diagnosis must be solved by actual study of each neoplasm, and comparison with contrast mounts or textbook-pictures is a worthless and dangerous method*. It is certain to mislead.

Degrees of Malignancy

The pathologist may be able to approximate a prognosis. He may be able to determine by the findings whether a growth is very malignant, fairly malignant, semi-malignant, occasionally malignant, or non-malignant. Of course, in doing this, he must keep in mind many factors, clinical as well as microscopical; and if he is expected to venture a usable opinion, he must know the site and the history of the lesion, as also he must understand the microscopical picture, so as to make his opinion worthy of record. The surgeon who establishes a plan of cooperation with

his tissue-man, instead of playing a game of "I know what it is; you find it out," will profit in the end.

This advice holds especially in regard to tumors of the gums, skin tumors, and growths in the intestine, rectum, bladder, nose, and ear, and so on. It applies especially to bone tumors. I recall one cancer (scirrhus of the sigmoid colon), with a history of growth of perhaps twenty, but, undoubtedly fifteen years, whereas most cancers of the bowels are very malignant. A very nasty tumor, microscopically speaking, of the appendix is usually only slightly malignant, clinically speaking; however, the pathologist could scarcely estimate its degree of malignancy when he did not know that it came from the appendix rather than the sigmoid colon. There are many other instances where clinical consideration and site are vital to the question, and, unless these are named by the surgeon, the tissue-pathologist should be reluctant to give an opinion as to the degree of malignancy, likelihood of secondaries, and prognosis in general.

Challenging a Clinical Opinion

It is well for the surgeon to include with the tissue specimen his opinion about the nature of the lesion. It not merely is the business of the pathologist to verify this diagnosis, but, to attempt to pick it to pieces, if such is possible. It is his duty to look for other lesions. It is his duty to look for causes. It is his duty in the case of each cancer section, to attempt to solve the question of cancer. In fact, it is his privilege to make each tissue examination rather tedious for himself, even though the very first field give a diagnosis suitable to the surgeon; for, in tissue-work, the pathologist must continually become a better diagnostician, even as the surgeon must improve his diagnostic ability. There is a tendency to overlook this fact.

The rapid tissue-man is not the safe tissue-man. Suppose, for example, the first sections from a suspicious breast lesion show benign adenoma; the pathologist's duty and task are not yet done. He should examine many other sections from other portions for evidences of malignant changes in this adenoma. I know of tissue-pathologists who take a single section from the material, stain it, examine it, then

venture an opinion. Usually, I will grant, they get the diagnosis exactly correct, but, there is a source of error; and, in routine work, this source of error makes itself manifest now and then. Very often, indeed, have I examined a dozen sections and found nothing even suspicious of malignant neoplasm; then I came upon a section that was absolutely cancerous.

I have asserted that the very best pathologist will get up against it now and then; and, from observation, I feel justified in including professors of pathology as falling into the class of best pathologists. Occasionally a pathologist who is sincere will be unable to venture a definite opinion or will finish with half a diagnosis. The "expert" pathologist who diagnoses rapidly and without difficulty is a dangerous consultant—I have seen it again and again. It is the all-around specialist who says "Let me peep at it—no cancer in that" who leaves misery in his path. I have seen a tissue diagnosed as tuberculous, when a survey of some other section would have revealed the presence of the ray-fungus. I have witnessed the "two-minute" method applied to a growth of the throat, and two months later the diagnosis by the family physician changed from papilloma to carcinoma. The pathologist should never "grandstand." Neither the surgeon nor the pathologist is infallible, and both do err occasionally; however, it is the flip-pant type of either that gets the species in bad.

Neither should assume an antagonistic attitude toward the other, but, *the two must work together*. However, because the surgeon suggests a diagnosis of cancer, is no reason why the pathologist should fail to challenge the clinical opinion, providing the pathological picture be different. In turn, the surgeon is not duty-bound to accept the dictum of the pathologist, but, should send him more of the material or submit a specimen to another tissue-man; and he has a perfect right to do this. After all, the decision is of more importance to the patient than to either consultant, although I do not agree that it is unimportant to the physician himself.

Usually the pathologist will verify the clinical diagnosis. Now and then he is

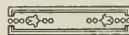
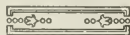
not justified in doing so. In medicine, we must be brave; and it takes a brave pathologist to challenge the opinion of one of his best clients; still, that client, if worth having, will appreciate the sincerity of the man doing the tissue-work.

Conclusions

Medical literature contains but little on the relations between surgeons and pathologists. I have tried to view the question from the two angles, although I am writing from the standpoint of the latter. More and more the surgeon is coming to demand this work, and, if he and the pathologist can do "team-work," the two together can throw more light upon surgical pathology and diagnosis than can many of the teaching laboratories. Actually, the man who makes tissue-pathology his life's work discovers many wonderful truths every day, and has a better knowledge of the cancer-question than the worker in the heavily endowed cancer-research-laboratory; he sees cancer at its daily activities and in its various phases. They work together, yet, not in harmony. The cancer-cell has solved its role and is merely carrying out its program. He at the ocular observes that program, but, he searches for the reason; aye, more than that, he has learned the reason. The research-man never will learn it. The diagnostic tissue-man may never dare suggest it, for fear of ridicule; still, the knowledge will make him a valuable worker in his place in medicine. He has been forced to devise methods regarded by the research-worker as impossible.

The most valuable research-worker today is the diagnostic tissue-pathologist; for, he is not a mere motive power for a microtome—his is the problem of diagnosis in every piece of work, and, *as in every other branch of diagnosis*, he is continually up against it. He dare not fail in a single instance; and, yet, it does happen that he fails now and then, even as does his colleague, the surgeon, who is also entrusted with diagnosis and human life.

The closer the cooperation, the less the number of errors. The closer the cooperation, the better the surgeon and the pathologist. The closer the cooperation, the better off the patient.



Early Cancer Diagnosis

By GEORGE O. JARVIS, M. D., Ashland, Oregon

AN editorial in *The New York Medical Journal* for June 30, 1917, emphasizes the need of a method for early diagnosis in cancer. Dr. Albert Abrams, of San Francisco, has devised and perfected such a method, which is accurate and which will give a definite answer in the very earliest stage, or in any other stage, of cancerous disease.

In cancer, the matter of early diagnosis is extremely important. Authorities agree that only early and radical removal offers a fair prospect of freedom from recurrence. In external cancers, it, naturally is possible to make a diagnosis earlier than if the growth be located internally. In gastric cancers, the diagnosis must await the appearance of "a cancer test"; but, this implies a fairly advanced carcinoma.

Reference to this method of diagnosis will be found in *The International Clinics*, vol. 1, 27th series, 1917, and also in the "Reference Handbook of the Medical Sciences," 7th volume, last edition.

The diagnostic reaction is based on these facts: (1) that the electrochemistry in normal tissues differs from that in abnormal tissues; (2) that energy from the tissues can be conducted along an insulated wire; and (3) that the ganglion-cells of the spinal cord, the peripheral ganglia or the parenchymatous cells themselves of the various organs will respond to energy conducted from an anlage of special physiologic activity (such as the beating heart) or from an anlage of pathologic activities (such as cancer node or a focus of infection).

There are great difficulties in the way of devising an automatic and mechanical method for registering the very slight differences of potential that exist in the tissues. Some five or six years ago, Doctor Abrams found that the human viscera constitute a wonderfully delicate mechanism for registering these minute differences of potential. In the earlier methods by which these principles were applied the energy was conducted from the diseased anlage directly to the region of the stomach in a healthy test-subject and the stomach

alone was employed as a registering mechanism.

This method permitted of an accurate diagnosis of cancer; but, not as readily, rapidly, and accurately as the present method. Neither did it as easily and accurately differentiate between different infections, such as tuberculosis, syphilis, streptococcic or colon-bacterial infection. The later method employed by Doctor Abrams is, to conduct the energy along an insulated wire from the diseased tissue,

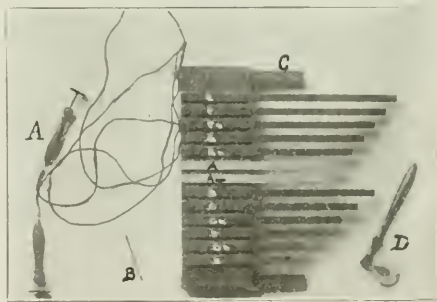


Fig. 1. Showing armamentarium.
A—Conducting wire.
B—Small bar magnet.
C—Xylophone of wood.
D—Piano hammer for xylophone

upon the back of a healthy test-subject, to a point located between the third and fourth thoracic vertebrae. In this way, the energy affects the ganglion-cells of the cord (presumably) and certainly affects the blood supply and condition of "tone" of the viscera through the splanchnic nerves. (Fig. 2-a).

Similar results are to be obtained if the electrode be applied to the test-subject over the second lumbar vertebra, though in this case the visceral reactions will not appear in the same localities as is the case when the energy is conducted to the level of between the third and fourth thoracic vertebrae. (Fig. 2-b.) This method is described in *The Journal of Physico-Clinical Medicine* (volume 1, No. 3, page 20).

A most remarkable fact is, that changes in the tissue tone and in the percussion note will be produced in the viscera at different positions according to the disease in the tissue under examination. For

instance, if cancer be present, an area of dulness of about 4 cm. in diameter will appear just below the left costal border and about 5 or 6 cm. from the middle line. This change in percussion note will be readily appreciated, because its range is from two to four notes of the musical scale, varying according to the intensity of the disease in the patient and the activity of the reflexes in the test-subject.



Fig. 2. Showing method of conducting energy from patient to healthy test subject.

The locations of the dulness produced by certain of the different diseases under consideration will be seen in Figure 3.

At the same time that the percussion tone rises, a sense of increased resistance will be communicated to the finger employed as a pleximeter and the plexor finger also will feel a difference. This difference is similar in kind, though less in degree, to that experienced when percussion is executed first over the stomach and then over the liver.

These reactions show themselves in the organs by change of density of shape and of percussion note. Alterations in the blood pressure may also be demonstrated in a test-subject if the energy is conducted in an appropriate manner.

In performing these reactions, it is well to see to it that the test-subject stands facing east or west—not north or south—as the “tone” of the viscera is increased when facing in the magnetic meridian. This interesting fact gives a clue to the mechanism through which birds, animals, and some human beings are able to find

their way without the aid of a compass. It seems that there is a different sensation throughout the body when the animal faces along the magnetic meridian (that is, toward the magnetic pole), while at the same time there is a rise in the percussion note over the various hollow viscera, including the lungs, of from one and a half to two and a half tones as measured on the musical scale. Evidently, the vagus tone is increased when an animal faces parallel to the magnetic meridian. (Fig. 2.) The splanchnic electronic reactions are more marked if the test-subject is “grounded” by standing on a metal plate connected with a water-pipe or something of the kind. Percussion of the abdomen is to be performed while energy is being conducted from the diseased area (Fig. 4).

The visceral reactions are present in patients in whom there is cancer or in whom the various infections are present, and they may usually be demonstrated in the patient's own person without the use of an intermediary, if the patient is not too fat. The test-subject is employed, because the lungs and abdominal areas of



Fig. 3. Location of dulness produced by certain diseases.

healthy persons are normally resonant and tympanic. Thus, one may compare the percussion note heard before and after the reaction has been elicited, causing the alteration to be more readily appreciated.

The method of producing the splanchnic diagnostic reactions is shown in the photographs. In Figure 1, the very simple apparatus employed is illustrated. The

wooden xylophone and hammer (c and d) are merely aids to the ear, and are not essentials. The small bar magnet (b) is not absolutely essential, but, is of assistance in determining the polarity of the energy under examination; though this

than is possible when the percussion strokes are executed in rapid succession. This demand is based upon the same fact of "fatigue of attention" as is the direction not to look at the colorimeter more than two or three seconds at a time when



Fig. 4. Showing method of percussing abdomen.

may be determined by facing the test-subject either north (to dissipate — energy) or south (to dissipate + energy). The aluminum electrode-terminals on the insulated conducting wire (d) are employed; and they are equipped with wooden handles, largely as a matter of convenience.

The writer employs a kind of wooden xylophone (Fig. 1-a), which consists of a hollow box with a number of sticks glued thereto, as a means of aiding the ear to measure the change in the percussion note. The range of the xylophone is the octave of the middle register beginning with F. One executes percussion over the abdomen before conducting the energy and decides with which note of the scale the percussion tone of the viscera most nearly coincides. Then conduct the energy and again decide with what note the tone now obtained most closely corresponds. By this means, differences in resonance are easily compared.

In executing percussion of the abdomen, it is well to use light but marked staccato blows and to make not more than one stroke every second. The common practice of making a number of rapid double strokes confuses the ear. The interval of time here suggested permits of more accurate perception of the tone differences

making an estimation of the hemoglobin by the colorimetric method.

One, thus, will have a sort of "tone-measure" at hand. A piano or other musical instrument may be made use of to determine the differences in percussion tones. The writer's personal preference, however, is, for a violin; as with it one may obtain precisely the note of the viscus under examination—not an approximation, as usually is the case if a fixed scale be employed. The difficulty with the violin is, that the quality of the tone does not correspond to the quality of the percussion note of the viscera, while the tone of the wooden xylophone does approximately correspond thereto. If one is so fortunate as to be able to appreciate absolute pitch, there will be no necessity for any adventitious aids.

The result of this conduction-test can be checked up by the fact that the vibratory rate of the energy from carcinoma is 30 and by the other fact that the visceral reaction may be immediately dissipated by pointing the south pole of the small bar magnet to the same point of the spine while the reaction is being made. This proves that the energy from carcinoma is of positive polarity. The vibratory rate is measured by an apparatus especially adapted to that purpose by Doctor Abrams.

If syphilis be present, it will be necessary to conduct the energy from certain definite areas of the patient's body; namely: from the region of the liver, the spleen or the middle thoracic vertebrae. In a case of congenital syphilis, a similar reaction will be produced by placing the patient's electrode over the eyeball, thus permitting differentiation between the congenital and the acquired forms of syphilis. In the congenital, but, not in the acquired form, another dull area will be found between the symphysis pubis and the umbilicus.

In the diagnosis of syphilis, concomitant Wassermann reactions were made; but, the Wassermann reactions were not positive in every case in which the electronic tests of Abrams showed the presence of syphilis and in which the clinical history and therapeutic results showed beyond reasonable doubt that the Wassermann reaction was at fault.

By means of this method the writer has made thirty diagnoses of cancer before operation, and these were fully substantiated by submitting the excised tissue to one or more pathologists who had no knowledge whatever of the methods employed for diagnosis or of any previous history of the patient; the personal equation thus being entirely excluded.

The writer has experimentally verified this diagnostic method by utilizing as test-subjects patients operated upon for various abdominal difficulties, and he proved by direct observation that there is an overfilling of the blood-vessels of the area over which the percussion note was found to have been raised when the energy from cancer-tissues or blood from infected patients was conducted to a point between the third and fourth thoracic vertebrae. This local vasodilation probably accounts for the change in the percussion note.

The maneuvers did no possible harm to the patients and were done only with the consent of the patients undergoing operation, for the most part under infiltration-(paravertebral) or spinal anesthesia, although sometimes under colonic (ether-oil) anesthesia.

The test was performed by using the patients under operation as test-subjects, just as would be done under other circumstances; only with the test-subject on the operating-table instead of standing

erect. The "patient's electrode" was brought into proximity with a bit of cancer-tissue, a tuberculous focus, a few drops of blood from a syphilitic patient or from a patient with streptococcic infection, as the case might be. The receiving electrode was held in place on the spine, between the third and fourth thoracic vertebrae with adhesive plaster.

The dilatation thus observed approximated a 75 percent increase in the caliber of the blood-vessels in the area in which dilatation occurred and was so marked that there could be no doubt but that dilatation did occur. At the same time, the percussion note over the dilated area rose to approximately the same extent as would be found in executing the test under ordinary circumstances. Both vasodilatation and dullness disappeared within three or four seconds after the receiving electrode was removed from the cancer or the blood from an infected patient; that is to say, in the time required for the viscus to execute its rhythm.

The information regarding electronic reactions of Abrams is being introduced to the medical profession at a time when the electrochemical conception of cellular activity is beginning to make headway. Without a clear idea of this electrophysical concept of physiologic and pathologic activities, these electronic reactions are difficult to comprehend, even though comparatively simple in technic.

By means of these electronic reactions, Dr. A. W. Boslough, of Ashland, Oregon, and the writer have been able to diagnose eleven gastric and other internal cancers at a time when there was only the smallest macroscopic sign of a cancer in the removed specimen. When the specimens were submitted to one or more competent pathologists, who had no knowledge of the case, beyond being told the region from which the tissue was removed, a diagnosis of malignancy was returned, with one exception. In this case, one pathologist pronounced it malignant and another benign; but, the recurrence of symptoms after operation and the circumstances of the subsequent death of the patient left no doubt but that the growth was malignant.

Specimens in which a suspicion of malignancy might exist, both from the history and from the macroscopic appearance, but, which the reaction of Abrams showed to

be benign, invariably proved, on pathologic examination, to be nonmalignant. The subsequent history of those pronounced benign has shown, so far as the lapse of time permits final judgement, that the diagnosis of a benign process was justified. The clinical course of those in which the diagnosis of malignancy was made has furnished—except in those cases where complete extirpation was possible—the best foundation for the diagnosis of malignancy that had been made.

With regard to bacterial infections: The tests made by the writer have been upon teeth the roots of which were infected and in which radiographs were made to show the possible existence of periradical tissue changes possible to demonstrate by the x-ray; upon other streptococcic infections; upon tuberculous, and upon luetic patients. Of these tooth infections, there were thirty-two cases in which the examination was quite complete; that is to say in which x-ray plates were made, the electronic test performed, and extraction, with macroscopic and microscopic examination of the extracted teeth, done. Extractions of the suspected teeth

proved the accuracy of the diagnosis of streptococcic infection. It cannot be said that no cases went undiagnosed, because teeth which yielded no reaction were not extracted. Even many teeth which yielded the reaction but were amenable to treatment were allowed to remain in place. The subsequent clinical history of the cases of suspected focal infection strongly substantiated the findings of the electronic method.

Of the accuracy and delicacy of this method of Doctor Abrams there can be no question. Its simplicity leads some to overlook the necessity for care and accuracy, joined with considerable study and experience and an accurate knowledge of anatomy and the very latest developments in physiology. In the hands of those who lack accurate and delicate percussion, who are unable to distinguish variations in density of tissues (resistance) and in the percussion sounds or who are unwilling to devote time and labor to the investigation of the methods and perfection of the technique, the results will be unreliable; as would be the case with any other diagnostic procedure.

Cancer of the Rectum

By CHARLES J. DRUECK, M. D., Chicago, Illinois

Professor of Rectal Diseases, Chicago Hospital College of Medicine; Surgeon to Fort Dearborn Hospital; Surgeon to People's Hospital, Chicago.

MOST frequently, the seat of cancer of the bowel is either in the cecum, the sigmoid flexure, or the rectum. These are the places where the fecal matter rests the longest.

Cancer is the most fatal disease, and one of the most painful occurring in the rectum. Its cause here, as is true for elsewhere in the body, still is obscure, and the theories advanced are so much at variance that I am not prepared to venture any definite opinion. Likewise, statisticians and pathologists vary considerably in their conclusions. While carcinoma of the large bowel is quite common, the small intestine is but rarely the primary seat. The large bowel contributes about 95 percent of all cases of cancer of the intestinal canal, and of these the rectum contributes 80 percent and the colon 15 percent. Cancer in general is

much more common now than formerly. Heredity seems to be a factor.

As regards the location of the disease, it is most frequently found about 3 or 5 inches up in the rectum, the lower limit being on a level with the internal sphincter, next in frequency at the anus (Williams estimates 3 cases at the anus to 40 within the rectum); and least frequently the growth is situated in the upper rectum, or sigmoid flexure. The region extending up from the internal sphincter not only is most frequently the site, but, also, cancers at this point most often are fatal; for, here the disease runs its course more rapidly and the lesion is more liable to accidents, owing to greater anatomical danger of obstruction.

Four different histological types of cancer are found at the anus or within the rectum; namely the epithelioma, the enceph-

aloid, scirrhus, and melanotic. All of these may become cystic, myomatous, colloid or ulcerated to such an extent as greatly to change their macroscopic and microscopic appearance. In their order of malignancy, the melanotic is the most fatal, next the encephaloid, then the epithelioma, and least of all the scirrhus growth.

Epithelioma of the Anus

At the anus, squamous, or pavement-cell epithelioma is the rule and is the same form of cancer that is so commonly seen on the lip. It originates in a preexisting fissure, ulcer, cicatrix, mole, wart, keratosis or chronic irritation, never on a normal uninjured anus. The tumor begins as a hard warty nodule just under the skin at the mucocutaneous border, and externally of the anus. This deviation of the tissue from the normal progresses rather slowly, and for a long while nothing is noticed but the little scales that are picked off as they continually form again, while beneath these scales or crusts are the ulceration and induration, these becoming greater as each succeeding scab is removed. Sometimes several distinct nodules are found about the anus. There is little or no tendency for the mass to extend into the rectum or into the outlying skin. It makes slow progress and does not ulcerate until late in its existence. A watery secretion exudes from the ulcer.

It is at this early scaly precancerous stage when the growth can most readily be removed; however, it is astonishing how frequently neither physician nor patient pay any attention to these conditions. If every anal irritation were removed, these epitheliomas would be very rare, if they occurred at all.

During the nodular stage of the cancer-growth, there is no pain, and also as the growth invades the perineum it is not sharply painful. Most patients speak rather of an uncomfortable feeling or a soreness. If the anus is eroded (which, however, is rare), the pain is similar to that proceeding from an irritable ulcer or fissure and it makes itself felt at the time when the growth begins to push through the mucous membrane. The cancerous ulcer bleeds or oozes easily when abraded but, the hemorrhage usually is slight. Epithelioma is distinguished from rodent ulcer by its nodular raised base covered with granulations. Microscopically, there are found the characteristic nests of squamous epithelial cells that

invade the lymph-spaces from the surface. The stroma is made up of fibrous and myxomatous tissue and is pretty well supplied with blood-vessels and inflammatory corpuscles.

Differential Diagnosis of Anal Cancer

Having contemplated the clinical picture of cancer at the anus, let us now differentiate it from other ulcerations of this region.

1. The *lupoid ulcer* begins at the same point, the ulcer, though, is clearcut and bands of cicatrization develop. Although these bands break down shortly after they form, fresh scars continue to form so that as a rule we can find some of them present. The ulcer spreads rapidly and sometimes proceeds to involve the whole buttock. The edges of the ulcers are not thickened. The base of the ulcer is soft, while beneath it there is a hard indurated mass. Examination of scrapings will usually show the presence of tubercle-bacilli.

2. The plain *tuberculous ulcerations* differ from the lupoid ones in that they first appear as anal fissures. They may be single or multiple, but, as they spread, they soon coalesce into one large ulcer. They are not painful. About the base of the ulcer there is a dense fibrous layer, which seems to limit the depth, and, so, the ulcer may surround the anus without reaching the connective tissue beneath the skin. It is a singular fact that any dense scar will act as a barrier to the spread of the ulcer—probably because of the lack of blood-vessels.

3. Simple *traumatic ulcers* at the anal margin differ somewhat from similar ulcers on other parts of the body, because numerous bacteria, habitants of the intestinal canal, abound in the skin of these parts. The ulcers are irregular in outline, with red, but usually sharp flat edges sloping down to the base of the ulcer. The base is crater-shaped, shows lots of granulations, and generally is discharging pus freely. This pus is foul-smelling, because of the many sudoriparous glands about these parts. The granulations bleed easily when wiped. The pain during defecation may be slight, and never is acute.

4. *Eczema* about the anus rarely is of the papular type, usually being of the erythematous form. In chronic cases, the skin becomes dry and brittle and cracks on stretching. Beneath the eczema, the skin is indurated, but, the hardening is in the skin, and not beneath it, as in cancer.

The lesion is wholly in the skin and moves with it. The ulcers, if present, are shallow.

5. In *rodent ulcer*, the edges are hard and well defined. The ulcer begins in the skin about the anus, not at the mucocutaneous border, as does cancer; it grows deeper, and has but few granulations, the induration about the base of the ulcer is only moderate in amount in contrast to the wide spreading induration about cancer.

6. *Irritable ulcer*, or fissure. The cardinal sign of irritable ulcer is the sharp, lancinating pain at defecation. The ulcer is located in and conforms to the shape of a fold in the anal mucosa, and it extends up to the sphincter grasp; it is shallow and the edges are inflamed, sometimes even thickened but never indurated. If there is a tumor associated with the ulcer, it is most likely the sentinal pile¹ or the ruptured crypt of Morgagni.

7. *Warts* may appear at the anal margin, these, however, have no indurated base. Ulceration of these warts occurs only rarely and then usually in dirty subjects only.

8. *Chancere* most commonly is situated in the skin just outside of the anal folds, the ulcer resembling chancres anywhere else. It is superficial and circular in outline, but, the induration at the base does not extend beyond the edges. The border of the wound is red, while the center is dark-gray. Chancres here are not painful.

Cancers Within the Rectum

Within the rectum, the diagnosis of malignant tumors is more perplexing. I have seen a mass of impacted feces, and even a distended urinary bladder set a medical man worrying about having to do with a rectal tumor. Both these cases were, of course, easily cured under appropriate treatment, still, one encounters a lot of such cases that are not so easily diagnosed.

Intra-rectal cancers belong to the columnar-cell growths and resemble the histological structures of the mucous membrane from which they grow. They are adenocarcinomas and closely resemble the benign adenoma; the glandular hyperplasia of the simple adenoma, though, is restricted to the mucous membrane and grows up into the lumen of the bowel, while the carcinoma permeates the submucous tissues and spreads out in every direction. Microscopically, the resemblance between the groups

of cancer-cells and the tubules of the normal gland is so great that the tumor may be mistaken for a benign adenoma, but, in the margin of the growth, quite atypical cells will be found.

These growths may arise in the cylindrical cells that line the crypts of Lieberkuehn and without any change in structure pierce the deeper layers of the rectum and cause metastatic growths. Microscopical inspection of sections of such a tumor does not determine its character as to benignancy. Although these growths may be benign at the start, the cylinder-cells very soon proliferate in some part of the mass, forming solid strings of cells. Then the goblet-cells disappear. However, not all adenomas here are benign at first. Sometimes the cells become polymorphous and fill up the alveolar spaces, when we have an alveolar carcinoma. The further the cancer-tissue is histologically removed from the normal, the more malignant it is.

These cancers arise above the sphincter and are easily differentiated from the squamous variety. Early in its existence the growth may appear pedunculated, and clinically it is impossible to distinguish it from simple adenoma, until the tendency toward a broad infiltrating base shows that it is malignant. Later, ulceration occurs and inflammatory changes are superimposed; all being aggravated by the irritation from the feces. These cancers vary somewhat in gross and microscopical appearance and also as to clinical history, according to the histological structure predominating in the makeup of the growth. Thus, although the same structural elements are involved, we find, respectively, either an encephaloid, scirrhus or melanotic cancer.

Encephaloid Cancer

The encephaloid cancer arises primarily in the crypts of Lieberkuehn, and it is enclosed in the connective-tissue capsule, which sends trabeculae into the mass and so divides it into lobules. The cells are large, round, and nucleated. It often is vascular, with large veins coursing through it and on its surface. In the interior, extravasations of blood give the tumor a soft, mushy feel, and it resembles brain-tissue in appearance—hence, its specific name, encephaloid. In other instances, it is spongy and shreddy, placenta-like. Later, a large amount of cancer-juice containing cells exudes on pressure, and, if dropped into water, it

¹The thickened wall of the anal pocket at the lower end of an anal fissure.

quickly diffuses, giving the whole a milky appearance. Paget considers this a valuable rough test in diagnosis. If seen early, the cancer is movable in the subjacent tissues, but, when seen later, it is soft and friable upon an indurated base.

These cancers grow rapidly and may fill the whole pelvis, involving the surrounding tissues, while secondary growths appear in neighboring organs. The glands are involved early, and, if the tumor is removed, it soon recurs, although considerable tem-



Cancer of the Rectum.

Specimen in the pathological museum of Northwestern University Medical School.

porary relief is obtained thereby, even the cachexia disappearing for a time. Digital examination is deceptive, because of the extreme softness of the tumor and the apparent fluctuation imparted; however, examination of a little aspirated fluid will remove all doubt, by disclosing the presence of cancer-cells and blood. As the deeper structures degenerate, they become cystic with a mucoid, glue-like, translucent, yellow substance, which distends the tissues; and the growth is called alveolar or colloid cancer. Generally speaking, it may be said that the softer the cancer mass, the more rapid its growth and the greater its malignancy. These encephaloid cancers are the

most malignant of the rectal tumors; they are so friable that they bleed upon the slight traumatism at an ordinary examination.

Scirrhus Cancer

True cancer, or scirrhus, is the slowest-growing and also the most frequently met with in the rectum. It arises in the subcutaneous connective tissue as a hard nodule beneath the normal mucous membrane and radiates out in various directions, principally, though, longitudinally up and down the rectum. These new extensions sometimes can be felt as hard bands or processes—claws—from which cancer receives its name. The cut tumor presents a cancer mass that is bluish-white and gristly with masses of fat and fatty tissue between the trabeculae, extending out into the normal tissue. As a rule, the center of the mass is degenerated and, if the tumor is cut, the center retracts, making a saucer-like appearance. This has been called the cancer-cup.

The scirrhus cancer is said to arise more frequently on the anterior wall of the rectum near the prostate gland, and infiltrates all surrounding tissues, eventually involving the bladder. A circular stricture, or collar, forms about the rectum, and as the lumen of the bowel is being closed an intractable constipation supervenes. Complete obstruction of the rectum may occur and even rupture of the gut, from fecal accumulations above the cancer, has occurred. Blood-vessels and nerves appear to be crushed out of the tumor, so, there is very little, if any, hemorrhage or pain. Ulceration comes on late in the scirrhus cancer, and, as there is very little absorption, or toxemia, the cachexia comes on late, also.

The diagnosis of scirrhus cancer is based upon its hardness and contractility; still, its history often is required to make possible differentiation from simple fibrous stricture of the bowels. The latter may exist for years, without any other symptom, perhaps, than the intractable constipation. Kelsey reports a case of dysenteric diarrhea that resulted in a stricture and presented a typical clinical picture of scirrhus cancer, but, had existed for eighteen years. Histologically, the scirrhus-cancer stroma is abundant and the alveoli are narrow, with the cancer-cells frequently small. Fatty degeneration of the cells often occurs, while the stroma remains subsequently to contract. Secondary metastatic growths occur

late, and there is hope to effect a cure providing that they are early and completely excised.

Melanotic Cancer

Melanotic cancer is rare within the rectum. Its histological relationship is not clear. It is classed as a carcinoma by certain pathologists, as a sarcoma by others. It is soft and medullated and has increased pigment. It is rapid in growth, very malignant, and often becomes generalized. Only

10 cases have been reported, and only 6 of these had complete histories. Of these, 5 were in men and 1 was in a woman. The ages of the subjects varied between 45 and 64 years. Microscopical examinations were made in 5 cases, and these were all classed as sarcoma. The symptomatology was the same as that of any rectal cancer, with the exception of one case, in which the stools were black, and in which the examining finger was blackened.

The Alcohol Problem as Seen in Ancient and Modern Times

By T. D. CROTHERS, M. D., Hartford, Connecticut

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EDITORIAL COMMENT.—This article is an excerpt from the advance proofsheets of a book soon to be published. Doctor Crothers very kindly permitted us to print the chapter, as here abstracted.

THERE is a historic side to the question of moderate drinking that strikingly confirms the biblical statement that there is nothing new under the sun. Recent researches in the tombs and sarcophagi of Egypt and the ruins of the buried cities of Babylon show that the temperance question and the use of wine and beer were topics of interest at least seven or eight thousand years ago. Radical laws were passed, regulating the drink-traffic and punishing violators by death. Excessive use of spirits was recognized in the early Egyptian dynasties as a species of madness with degrees of irresponsibility. In order to take advantage of another man for a base purpose, he was made drunk by beer or wine. These facts were well recognized. The same questions came up then as today: To what extent may one drink small quantities of beer or wine and preserve his vigor and health; also, does their moderate use daily lengthen life and give more efficiency to the labor and one's vigor?

Laws enacted in the time of Ptolemæus I, somewhere about 8,000 years ago, indicate that wine was believed to have a special influence over the spirit-life—that through its influence the spirit could demonstrate itself, break away the bonds that held it and reign for a time in the flesh. The man

who drank heavily and was wild and delirious was in the power of a bad, destructive spirit, which sought to break down everything that was good; when he was low and beastly in his conduct, it was through some gross demon in possession; and so on through the various degrees of abnormal conduct, which indicated the good or the bad spirit that had gained possession of one.

It was distinctly stated that it was very dangerous and destructive to allow spirits to come into the life of the present, breaking down and changing the direction and force which it should take. Hence, the man who got drunk often and acted wildly and badly was given over to the possession of demons and his future was one of great doubt. His spirit would be crushed and he never could come back after death to occupy his body again, but, would be lost in the shadows of some dark, miserable world. Men who persisted in drinking to the point of intoxication either were made slaves or were executed—they had no part in rational life.

Effect of Alcohol in Small Quantities

In one papyrus it is asserted that wine taken daily in small quantities opens the door of the underworld and gives good and bad spirits an opportunity to break down the barriers that hold men free until they

are called to leave the body. The inn which men occupy until death shall call the tenant away is injured by wine in small quantities, and the enjoyment coming from its use is followed by sorrow, discontent, and unrest; and the moderate wine-drinker is never satisfied with this present condition, but, is always looking for some other, better condition, which wine seems to bring to him, only to plunge him back into the dark recesses of sorrow.

Wine Forbidden to Officers

On the Babylon cuneiform tablets are recorded laws forbidding the use of wine in any form to persons engaged in public business, and which asserted that no work done for the government by persons using wine could be perfect. All builders of palaces, officers of armies, and managers of public works were required to abstain, absolutely, from all use of wine.

In another age, the king, in a royal decree, attributes recent disasters to the use of wine by the leaders, and commands, under pain of death, that no spirits shall be taken by persons engaged in doing public work.

Various reasons were given why wine should not be used, the principle one seeming to have been that it made men dishonest and selfish and unfaithful to the interests of the monarch. In Egypt, the reasons were theological; in Babylon, they were commercial, economic, and had reference to the inefficiency and losses which followed its indulgence.

In celebrating the Feast of the Dead in Egypt, where each celebrant partook of wine into which the spirit of his ancestor had entered, the question would be how much he could drink, and what quantity was safe so that he could carry on the observances of the sacrament without confusion. Eventually, it was decided that the priests alone could drink the wine with safety and that the worshippers, looking on, must catch something of the spirit of their ancestors and friends who came back and entered into the fruits and drinks of the sacrament.

The same question has arisen in the churches of today, namely, whether wine is safe for sacramental purposes, and the facts gathered to prove its danger have assumed great proportions, and many of the churches already have substituted unfemented grape-juice for this purpose. Prob-

ably that is what was done in Egypt in that long-distant past.

What Scientific Tests Prove

Science has been testing this question of moderate drinking, and its conclusions are becoming more and more emphatic; and, curiously, some of the whimsical reasons given by the ancients have been found to have been shrewd approximations of actual facts as they are now just beginning to be recognized.

The theory so confidently asserted in many quarters, and believed to be beyond question, namely, that alcohol in small doses has a tonic action on the body, giving it additional strength and vigor, has no support in modern research; rather, on the contrary, its so-called good effects are found to be due to its narcotic, soporific properties. For example:

A man, temperate and well, is carefully measured from day to day, to determine the capacity of his senses of sight, hearing, taste, and touch; also his muscular power, fatigue-sense, rapidity of thought, memory, and capacity of endurance. The averages of many days' examinations constitute a basis of comparison; and then the man is given, say, a half-ounce of spirits, usually ethylic alcohol in water, for the reason that this is the purest and most uniform of all spirituous drinks. One hour later he is subjected to the tests, when it is found that all his functions are depressed and the senses are diminished in acuteness and capacity. And this can be expressed in figures. Thus, the eyesight and hearing are diminished in acuteness to the extent of so many inches or feet. The muscular output is lowered by so many pounds, and the fatigue-point is increased, showing diminished capacity for exertion and endurance. The brain has lost its quickness and moves more slowly, and this is measurable in seconds. The power of comparing one thing with another is diminished, and the percentage of mistakes in memory-tests has increased to nearly double. And so on with every function of the body. The heart's action has first been raised, but then has fallen as far below the normal as it had been forced above.

The conclusion is, that alcohol is not a tonic, does not impart new power and strength, is not a stimulant capable of rousing up latent energies and enabling one to

do greater work; but, rather, that its effects are the same in every instance and under all conditions, namely, depressing and sleep-producing.

Another fact not popularly recognized is, that the action of alcohol is cumulative, that is, the effects of continuous use cumulate and finally become manifested in some obscure injury of the mind or nervous system or by degeneration of the organs.

In Europe, gout, so-called rheumatism, heart disease, and kidney disease are the very common terminal lesions of moderate drinkers. In this country, we have apoplexy, cerebral hemorrhage, so-called strokes (paralysis of different parts of the body), pneumonia ending fatally through paralysis of nerves leading to the lungs, and the so-called galloping pulmonary tuberculosis with its sudden and rapidly fatal outcome.

Heart disease includes a great variety of affections that cause a sudden stopping of the heart, either with or without any exciting cause—in reality, a wearing out and stopping of the organ from age and debility.

Effects of Wine and Beer

Small doses of alcohol taken in the shape of wine or beer at the table have precisely the same effect as is produced by diluted grain-alcohols; these differing merely by the simultaneous presence of some extractive matters, ferments, toxins, and substances that derange digestion and favor the development of noxious germs. Furthermore, the liver is overworked in its enforced efforts to eliminate the products of foods that are not available for building up the body. The beer-drinker is literally blocking up the system with waste products, which interfere with normal supply and overtax the kidneys. As a result, Bright's disease and other disorders cause untimely death. One who drinks wine at meals is taking, beside the small amount of alcohol, acid and salts, and extractive matters that may be very dangerous and obstructive to the food supply of the body, deranging the protoplasm and the food-products and increasing the wastes, as well as diminishing the quality of the supply.

A very pronounced effect from the steady use of beer and wine or small quantities of spirits is, the derangement of the circulatory system. Alcohol diminishes the arterial tension. The blood is propelled

from the heart in greater velocity and the walls of the vessels are strained, so that they can not contract the vessels and force the current back with the same velocity; and after a time this failure produces paralysis, or inability to expand or contract according to the pressure, and this produces congestion. The effect of alcohol on the heart thus causes it to throw a greater volume of blood with greater rapidity for the first few moments after spirits are ingested, but, after that its power is diminished. The blood current is weaker; both the power of driving it out and the capacity of returning it to the heart are feeble. The flushed face of drinkers after a single glass of beer or spirits shows this mechanical obstruction. The beer- and wine-nose and face of persons who have indulged in these excitants a long time show the permanency of this obstruction. This surface appearance extends to the brain and other parts of the body and comes from the moderate use of spirits.

Wine and beer, when partaken in childhood, check cellular growth, destroy protoplasm, and change the entire physical nature of the child. Studies of heredity show this very markedly, particularly where spirits in any form had been used continuously.

The Endurance Impaired

There is another condition, of a more obscure nature, which scientific studies, both in the laboratory and in individual cases, have elucidated, namely, the incapacity and physical defects seen in moderate drinkers.

First, the power of endurance is greatly diminished. No person using spirits for any length of time, in small quantities or otherwise, can endure fatigue, mental strain, and muscular effort, as can those who do not drink. When put to the actual test, they break down and exhibit incapacity. Two men, one a total abstainer and the other a beer-drinker, both following the same occupation and both seemingly in excellent health, started on a bicycle-ride. The beer-drinker gave out at the end of 100 miles; the other continued to the end of the journey, some 400 miles, without any discomfort.

Moderate drinkers are unable to exercise muscular strength and to do mental work beyond a certain narrow limit without suffering. The capacity to add figures, to lift weights, to walk certain distances, to direct affairs requiring attention to detail, is uni-

versally markedly lowered in this class of persons. Studies of the mental capacity of moderate drinkers reveal the same early fatigue-point and the incapacity to hold the mind to a definite topic clearly. Faults of memory are apparent; failure of consecutive reasoning, absence of conservatism, credulity, skepticism, and a great variety of fine mental shadows and so-called weakness mark the mental decline of persons who drink steadily. Curiously enough, such persons are never conscious of this fact, and are inclined to minimize it by attributing it to a failure of others to judge them properly. Psychological examinations bring out these defects very markedly. Dickens' later stories show startling evidence of the rapid decline of his genius, both in plot and description.

The conclusion is, that alcohol is an anesthetic in its action on the delicate processes of the brain and organism, and a persistent derangement steadily carried on is

sure to leave permanent defects that may not be recognized until irreparable damage has been done. Probably the pronounced irritant action of alcohol on the cells and the circulation is in the nature of a shock, which, by constant repetition, destroys the uniformity and perfection of the activities of the body.

The well-known illustration of a steel bar that is struck lightly with a hammer continuously for a long period and then suddenly falls apart is applicable here. The concussion from each blow has finally destroyed the tenacity of the fibers and they break down—not from one blow, but from the constant succession of shocks, which has prevented readjustment and restoration following the blows.

In like manner, the continuous use of spirits lowers the repair processes and deranges the defensive forces of the body beyond the point of recovery, and thus invites disease, disintegration, and death.

The Progress of Psychiatry During the Last Twenty-five Years

By BAYARD HOLMES, M. D., Chicago, Illinois

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IT is hopeless to undertake anything but a personal sketch of the substantial progress made in the last quarter of a century in our knowledge of the insanities and in our care and provision for the insane themselves within our limit of two thousand words. Fortunately, we may begin with the classification of Kraplin, which appeared early in this period and still holds good. Thus, we find that in all languages the clinical nomenclature proposed by this great psychiatrist has been accepted and still remains in use. But, he taught little or no pathology, little etiology, and less therapeutics. We will confine ourselves to the more comprehensive groups and eliminate all exceptional and many interesting but numerically unimportant factors. We may select, for example, (1) paresis, (2) dementia præcox, (3) manic-depressive insanity, and (4) the senile insanities.

Advances in Our Knowledge of Paresis.

At the beginning of our period, there was a well-founded clinical opinion that

syphilis generally is present in paresis; however, it was presumed, and stoutly contended, that the disease did appear and might occur where no syphilitic infection had ever existed. There was, however, held to be a distinction between brain syphilis without paresis, and brain syphilis with paresis; and this opinion still confuses many.

Such a distinction, however, was swept away by the morphologic studies of Nissl and his school, and especially by the histologic demonstrations of Alzheimer. It is now possible to assert from the histologic morphology of a brain alone that the patient was or was not a parietic. This is the one victory of the pathologic morphologist in the field of psychiatric medicine. There is nothing anywhere to compare with it, except in the recognition of that alcohol-psychosis known as Korsakov's disease. In no other of our four major clinical groups, is the morphology diagnostically conclusive or even suggestive. In dementia præcox, in manic-depressive insanity, and even in

senile dementia, the morphologic evidence is *nil*, or, if it can be said to be recognizable, it is not conclusive.

Further, during the last quarter of a century, two marvelous advances in syphilology make the diagnosis of that disease in any form almost absolute and thus clear up entirely the etiology of any of its manifestations, paresis among them. The spirochetes are demonstrable in the tissues of the body, while during life the antibodies are recognized in the blood and are perfectly diagnostic of the presence of the infection (Wasserman reaction). It would hardly be worth while to discuss with any psychiatrist of today the question of the non-syphilitic origin of paresis or of the etiologic difference between various clinical form of cerebral syphilis. The examination of the cerebrospinal fluid by the "goldsol" and the morphologic methods has further assisted in making possible the early and positive diagnosis of paresis.

Unfortunately, the solution of the etiologic problem of paresis has not been attended by any great strides in its treatment. It is still a fact that the modern antisiphilitic medication is but exceptionally effective in paresis. Nevertheless, the diagnostic possibilities of the Wassermann reaction and the effectiveness of early general and well-measured intravenous medication tend greatly to diminish the number of neglected and untreated patients from whom the bulk of the paretics are recruited. Intraspinial and intracranial medication in established paresis is still of questionable usefulness. The prevention and cure of paresis is a question of early diagnosis of syphilis and of effective treatment, i. e., free-dispensary work.

The Etiology and Treatment of Dementia Præcox

The work of a multitude of isolated students on the pathologic morphology of dementia præcox has, during the last ten years of our period, brought forth some scant positive results. These patients have a heavy brain and one in which the sulphur content is increased. There is also a hydrocephalic condition of moderate extent, which, as a rule, is greater on the left than on the right side. Morphology has nothing new to offer, and, although Southard and Nissl point out particular modifications in the cellular anatomy of the brains of some of these patients, there really is *no abnor-*

mal morphology of the brain characteristic of dementia præcox.

The psychogonists early took advantage of the absence of brain changes, to defend their negativistic philosophy; however, Cazemali has shown that the blood pressure in dementia præcox is lower than normal, and Willi Schmidt and Schultz have demonstrated that the intramuscular injection of $\frac{1}{2}$ mil (Cc.) of adrenalin (P. D. & Co.'s) does not raise it, but, rather, ordinarily causes it to fall. (Adrenalin pressor paradox.) Installation of a few drops of adrenalin solution into the conjunctival sac causes the adjacent pupil of the dementia-præcox patient to dilate. (Pupillary paradox.) As a rule, the blood is highly concentrated and the leukocytes are diminished. (Polycythemia and leukopenia.) The number of these corpuscles fluctuates rapidly and betterment generally appears when the number of corpuscles approaches normal.

The intraspinal pressure (and, therefore, probably the intracranial pressure) in dementia-præcox patients is high (150 to 380 mm. of water), as has been demonstrated in the laboratory of the Psychopathic Hospital. The normal for healthy young men and women is 40 to 90 mm. of water. Even after the grand remissions which our treatment has generally brought about, the spinal pressure remains high.

Nearly all dementia-præcox patients when examined fluoroscopically after a barium meal, disclose a pronounced cecal stasis, extended from forty-eight hours to four or five weeks. The cecum is thick and its distal portion retort-shaped, terminating in the ring of Cannon. This ring is in a state of tonic spasm capable of sustaining in some instances a column of water 32 to 55 inches high before it gives way, and allows the water to pass into the transverse colon. The feces contain a toxic substance that may be removed by dialysing. This substance gives the Pauly reaction; it produces a hive-like erythema when scratched upon the skin; and it causes the virgin guinea-pig's uterus to contract. These points have all been repeatedly demonstrated in my laboratory. In the stool, there is a colon-bacillus that has the power of catabolizing histidin in 5-per-cent solutions at a temperature of 37 degrees C. The maximum product is obtained at the end of the fifth day.

It is uncertain whether there is any change in the calcium content of the blood

that might be related to the spasm of the sphincter of Cannon; however, in the meagre examinations that we have already made, the calcium content of the blood seemed to be higher than normal. In spasms of the pylorus, the conditions are different, for, there a calcium poverty of the blood and an increased calcium content of the brain obtains.

In my own laboratory, one patient has recovered, apparently, of a typical and severe case of dementia-præcox by a detoxicating process somewhat similar to that employed for morphine- and alcohol-habituates and known as the "Townsend-Lambert" treatment. Four other patients have not responded favorably to this method. The idea is, to paralyze the circular muscles of the sphincter by means of large doses of belladonna and hyoscyamus and to clean out the gut freely by giving compound cathartic pills and pills of blue mass. The remedy is continued until the stools are highly tinged with bile; twenty-four to thirty-six hours.

Among 19 patients treated by the intravenous injection of large quantities (500 to 1500 mls., or Cc.) of physiologic salt solution, 2 have made a remarkable recovery, but, the remainder evinced little or no reaction. One of the recovered boys has been working in the same shop for seven months and appears to be fit and alert.

The performance of an appendicostomy and the daily irrigation, five hours after the last meal, of the cecum and colon with 6 to 10 quarts of very warm water—which also may contain glucose and yeast—has resulted in the apparently complete recovery of all except 2 of the 14 patients. The improvement shows itself almost at once; however, 2 of the patients failed to reveal

any physical or mental benefit for three or four months after the operation.

Manic-Depressive Insanity

There is no morphologic pathology of manic-depressive insanity. It is the most hopeful of all conditions for which patients are committed to our state institution. The treatment is more successful than rational. Elimination, baths, outdoor life, and relative isolation effect a large percentage of cures with little or no mental deterioration.

There has been little progress in the treatment of the insanity of the aged outside of better hygienic conditions and more vigorous and rational elimination. In these cases the diet is a matter of the utmost account and where distortions of viscera and displacements exist, a better alimentation and improved mental condition follow replacement, mechanical support, massage, baths and well-directed exercise and diet.

To summarize, we can say that whereas at the beginning of our period the physical basis of no mental disease had been demonstrated, the physical basis of every form of mental disease has now been proven beyond any possibility of doubt. While at the beginning of our period only occasionally did recovery follow after commitment and then for the most part in the manic-depressive group and in the aged demented, now a large number of paretics recover by vigorous anti-syphilitic treatment on early diagnosis and there is reason to believe that the condition of the dementia-præcox patient is not so devoid of succor as we have generally been taught to believe.

In a following paper we will discuss the progress of psychiatry from the standpoint of architecture and material equipment, from the standpoint of administration and from the standpoint of professional service.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucaleo, Mexico

[Continued from November issue, page 322]

Wayside Temptations

HUMAN nature in man, however curbed, cribbed, confined, is like the mental state of the fabled "sow that is washed": a pathetic yearning, a longing fondness to return to the abjured haunts spasmodically seizes one in some unguarded moment, if

but to peep back askance with one eye and then to plant the foot more firmly forward. This thing of mining out an impassable gulf between oneself and hope on earth may be somewhat serious, after the die is cast and the whirling flood is seething behind.

In the temporary absence of the family

physician, I was called to attend a wealthy planter's wife, who was down with a perilous fever. I found a queenly Andalusian woman of middle age, the mother of a daughter of some seventeen summers, the very counterpart of my lost Carrie, and whose father was of pure Castilian stock; but, a hurried survey disclosed the patient in a most pathetic state, in which I could not discover a single symptom warranting a favorable prognosis. The patient was unconscious, although there were evident no signs of immediate dissolution. I went to work with an indomitable will, as never before nor since have I felt more positively intense. The girl clung to the side of the cot where lay her fevered mother, convulsed with a suppressed emotion that neither heaving sigh nor moistening eye betrayed, yet not masked from the searching scrutiny of my practiced eye. I spoke to her: "Pobrecita! puedes ayudarme?"—poor little one! can you assist me?" And without a tremor in her low voice she assured me that she could and would unflinchingly, with her last drop of blood, do anything I asked if it would modify one pang of her mother's suffering.

Rapidly as thought I instructed the girl in the mysteries of enematas, sponging the body, massage, whatever of like measures I relucted to perform in her presence. Forthwith she bared up to the shoulders her rounded arms of classic mold, and tied a big kitchen-apron around her pearly neck—and I had before me a trained nurse that might have been the envy of ninety-nine of a hundred doctors. To put medicine into the patient's mouth, it was necessary to raise her head. The girl flung her arm under the neck and raised her mother with agile dexterity and then lowered her again with a delicate care I have never seen surpassed.

Thus we worked on through the long and anxious hours of the night filled with uncertainties, the wornout husband and servant girls the while sleeping in chairs. I managed the hypodermic medication, and she the clysters, as necessity demanded. When waiting between treatments, she held her hands tightly clasped against her bosom, her glorious dreamy eyes of sorrow riveted on the marble-like features of her mother, perhaps watching with greater solicitude for some cheering change than was I, scanning that same pallid face.

The suspense was too terrible for words

to portray. The woman's temperature held tenaciously at 41.3° C., hour after hour—after ten 15-minute, four 30-minute, and two one-hour doses of aconitine. In desperation, I then returned to 15-minute dosage, three times, repeated; and then, at last, a slight moisture, like a timid dew, began to glitter on the woman's parching forehead, and, in one more hour she was in a perspiration like that of a Turkish bath, and the temperature down to 38.2 degrees. And then—"Oh, doctor! God will bless you eternally!" burst from the pallid lips of the watching girl—the first words uttered by either of us during three long, trying hours.

By midnight of the second day the patient was conscious and feeling refreshed; still, I was so urgently importuned that I remained four days longer, when she was able to sit up in a rocking chair.

That time I was forty years younger than I am tonight, with no tint of the frost of forty-five winters in my black hair and beard—in fact, looking some ten years younger than I actually was. I probably was professionally attractive, as the only inordinate pride I have is, that I am a clinical artist, and the only ambition I know is, to be able to cope successfully where all my classical education admonishes me that there is no hope for my patient. And thus, it may be, I towered in the eyes of the fair young Mexican senorita when she saw her adored mother, seated in the rocking-chair, able to walk to the table alone and sit with me through the farewell dinner. Mayhap I left behind me in that home circle a rare feeling of gratitude. Disraeli—Earl Beaconsfield—when at the zenith of his career was asked why he married as he had married, and his answer was: "For a reason to which you are a stranger, sir—gratitude."

Gratitude

There is genuine gratitude for professional service, sometimes, where the compensation has been most liberal as well as where there was no remuneration. I have met such heartfelt gratitude very often, many more times, indeed, than people are wont to believe that it exists. And, really, the most pleasing compensation I ever have, whether in cold cash or otherwise, is, to witness a "family jubilee," such as earlier in this narrative I told of—about the patient sitting up in bed sucking an orange in the early morning, when he had

seemed hopeless the day before, or such cheering relief as that of the incident just portrayed.

The Happy Days at the Plantation

Two months later, the family-carriage of the planter drew up in front of my hamlet office, bringing me a request that I go along to the plantation. No explanation accompanied this invitation. The father, the mother, and the daughter met me on the veranda, all in blooming health, apparently. Naturally I supposed I was called to attend some sick servant. We proceeded to the parlor, and entered into a general conversation, when, after a respectable time, I ventured to ask about the patient. The answer came from the laughing girl: "O, doctor, we three are the only patients you are to find; everybody in the place is in blooming health." Then the good people explained that the hamlet was such a dull place Sundays that the old gentleman expressed the thought that they owed me sufficient gratitude to decoy me out to a little country-house picnic.

I passed a charming day, while the fair young beauty was more enchanting than can be told, enough to have shaken the faith and vows of an Anchorite. She played the piano exquisitely and sang rather sweetly, in the thrilling cadence of the voice of the far South. The mother went away to the kitchen to look after the preparation of an extra dinner, and the father was called out, for some purpose, by the manager, so that the fair girl was left alone with me in the big parlor. She had been to Paris and New York and spoke both English and French quite well. And she conversed interestingly of Paris, of the little shops and the big stores, and the many things that I had quite forgotten. She wished to talk of New York, but, as I had not seen that city since before I went to Paris, it was all Choctaw to me. So, we finally drifted into literature. She was pretty deep in some of the popular French

literature, even some that I had never read—and I had devoured much of it in Paris, on the new plantation I have mentioned, and during the Civil War. The young woman had stacks of these books in the house. By all odds, she was the brightest, most practical young woman I had ever met in Mexico, although living so far away from the more elegant centers. But finally the dinner-bell brought the enchanting reverie to an end.

The repast finished, saddled horses stood ready, and away we galloped over the big plantation, which was largely devoted to grazing; but, one section of it, where big black bulls, wild as deer, were being bred for the bullfights, we did not enter. By easy stages, we ascended to the summit of a rugged mountain, that fell away, terrace-like, toward the Pacific, whose blue crystal glittered beneath the clear tropical sunshine, and whence there blew refreshing zephyrs. Resting a spell, I looked long and intently over that vast waste of water—no more desolate and lonely than my own stranded life—silently musing on the nameless mysteries slumbering beneath that sweeping surge, till unconsciously I murmured, "Till the dirges of his hope that melancholy burden bore of Never,—nevermore."

"And why that mournful pathos, doctor? The raven of the ark is not now brooding with flapless wing over that azure wilderness." Thus a soft, sweet voice near my elbow broke upon my ear, and aroused me to living realities; it made me shudder, even as I shuddered when I beheld the ruins of my paternal homestead in the chilly gray twilight of my homecoming on that fateful morn of long ago. No more was said. As the day drew to a close, we headed our mounts homeward, and after a repast the carriage took me back to my lonely office, if not a wiser certainly not a sadder man.

[To be continued.]



What Others are Doing

A HAPPY HYPNOTIC COMBINATION: APOMORPHINE WITH HYOSCINE

In *The New York Medical Journal* for December 1 last, Dr. C. J. Douglas calls attention to the fact that apomorphine, administered hypodermically in small doses, shuts off the stream of consciousness with valve-like precision. For many years he has relied upon this remedy as his most valuable hypnotic, the only disadvantage being that the action, while prompt, is but transient.

On the other hand, hyosine, which now is generally recognized as a hypnotic of remarkable merit, does not establish its soporific effect until one or more hours after administration. The distressing feature of this peculiarity is, that at first patients are liable to be excited, instead of calmed, by hyosine, their great restlessness requiring constant attention so as to keep them in the recumbent position.

However, the transient character of the hypnotic action of apomorphine and the early exciting action of hyosine are both eliminated by a suitable combination of the two; patients succumbing to sleep soon after the administration of the injection, and this sleep being prolonged until the lasting action of the hyosine has been exhausted.

For the hyosine, Doctor Douglas declares that the average dose may best be fixed as 1-150 of a grain, while under no circumstance should 1-100 gram be exceeded. Concerning the dose of apomorphine, he gives it as his belief that 1-30 of a grain, as originally recommended by him, is unduly large and that a smaller dose as a rule is preferable—this being from 1-50 to 1-40 of a grain.

Here, then, we have an emergency hypnotic, combining two remedies that are entirely unlike, each attacking the problem from a different angle, each supplying the other's deficiencies, and each correcting the other's faults. When quick action is desired, in conjunction with entire safety,

and yet a reasonable probability of a good night's sleep, this has been found a most dependable remedy. In the treatment of the excited stage of alcoholism and other mental ailments, it is especially valuable. It promptly overcomes the insomnia of these patients, regardless of their wishes in the matter. To be able thus safely to enforce sleep, even when the patient's unbalanced mind makes him earnestly desire to keep awake, is quite worth while and is an accomplishment that gives satisfaction to every one concerned.

CONSTIPATION IN INFANTS AND YOUNG CHILDREN

In discussing the subject named in the caption, in the *International Clinics* (1917, vol. 3), C. G. Grulee summarizes his views as follows: "I should like to urge that catharsis be abandoned as a routine treatment; to ask that the simple rules of diet be insisted upon; and that, when these are not sufficiently effective, such mechanical factors as glycerin suppositories and liquid paraffin be resorted to, and that only in extreme cases of acute constipation a cathartic be used."

PAPAVERINE IN URETERAL CALCULUS

IN CLINICAL MEDICINE for September, 1916, there was presented a review of some work done by Doctor Macht and his associates with papaverine. On the strength of the observation that papaverine lowers the tonus of all organs composed of smooth muscle, Doctor Macht, together with Doctor Geraghty, conceived the idea to introduce a solution of papaverine through the catheter directly into the ureter of a patient who was suffering from ureteral calculus. The results of this clinical test have been reported in *The Johns Hopkins Hospital Bulletin* for April, 1916, page 119.

In this experiment, 5 cubic centimeters of a 2-percent solution of papaverine hy-

drochloride was introduced into the ureter just below the stone. On the same afternoon, slight colicky pains appeared, during which the stone descended a considerable distance. After a second injection of the papaverine, the calculus was passed spontaneously.

Undertaking thereafter a number of experiments on the isolated guinea-pig ureter Macht found that the ring of pig's ureter when suspended in oxygenated Locke solution, contracted rhythmically not unlike a frog's heart, under the circumstances, but, that relaxation and a discontinuance of the contraction occurred after papaverine solution had been added. It was ascertained that papaverine exerts a local as well as a general analgesic effect.

This experience found confirmation in several observations reported by H. W. E. Walther in *The Urologic and Cutaneous Review* for September, 1916. This writer relates the cases of three patients suffering from ureteral calculus, in all of whom the injection of papaverine into the ureter, just below the stone, was followed by the discharge of all calculi present, and that the expulsion was virtually painless in every instance. Doctor Walther employed the sulphate of papaverine, because of its greater solubility.

RELATIVE MYDRIATIC VALUE OF ATROPINE AND HYOSCINE

Experiments conducted by G. Joachimuglu on the relative mydriatic powers of atropine and hyoscine have demonstrated (*Berlin. Klin. Woch.*), with regard to cats, that the latter alkaloid is ten time more active than the former; a fact that may be expected to prove of value in practice.

CALCIUM SULPHIDE IN SMALLPOX

An interesting account of the efficient antiseptic action of calcium sulphide in smallpox is reported by Dr. F. S. Diller, of Rantoul, Illinois, to *The Therapeutic Digest*. This account bears upon four cases of smallpox, in each of which the patient received 1 grain of calcium sulphide every four hours during the more severe stages of the disease.

The most severe case (No. 4) was that of J. S., aged 53 years. Septicemia became

quite pronounced during the pustular stage and the patient was more or less flighty and restless, owing, no doubt, to the high fever. He received 30 minims of normal tincture of echinacea every two hours, also 1 grain of calcium sulphide every four hours. Marked improvement was manifest in twenty-four hours. The nervous symptoms lessened and the temperature gradually came down.

Since in the other patients no evidences of any undue absorption of toxins or of unusual septic infection developed, treatment was limited to the calcium sulphide. All made an uneventful recovery.

AN ANALYSIS OF 125 CASES OF GOITER

Leigh F. Watson, the author of an article on this subject published in *The New York Medical Journal* for September 22 (p. 549), reviews the records of 125 goiter-patients, with reference to the cause, patient's age at the time of attack, and the effect of previous operations in certain of the cases. He illustrates, by means of tables, the degree of enlargement and gives the results following quinine and urea injections.

In 43 percent of the subjects, no exciting cause could be ascertained; in the remaining 57 percent, the attack could be ascribed to a definite exciting cause. Of the 125 cases, 15 percent were caused by worry; parturition was responsible for 11 percent; in 9 percent, the condition was due to puberty. There was a family-history of goiter in 20 percent and of nervousness in 11 percent, while 19 percent had had tonsillitis. Of the exophthalmic patients, 5 percent first noticed the goiter eight years before the examination, at the average age of 34 years, and the symptoms developed at the age of 40. A history of an acute onset was given by 50 percent, two years before coming under observation at the average age of 29 years. Of the nonexophthalmic patients observed more marked symptoms of intoxication made their appearance in 60 percent as the goiter became more chronic.

Before coming under treatment, 5 exophthalmic patients had had ligation of the superior thyroid arteries, followed by temporary relief; 4 had had partial thyroidectomies, without permanent benefit; 3

had had pelvic operations, without a lessening of the hyperthyroidism; the condition of 1 was aggravated by a panhysterectomy; 1 had had a tonsillectomy six months before, without influence upon the severity of the exophthalmic symptoms. Enlargement of the gland ordinarily begins in the right lobe, sometimes in the isthmus, and least frequently in the left lobe. In 95 percent of the exophthalmic patients of this group, both lobes and the isthmus were involved before the goiter became exophthalmic. A majority of the patients noticed increasing symptoms of intoxication as the goiter became more chronic, with gradual involvement of both lobes and the isthmus. Of the mildly toxic patients, 18 percent became exophthalmic after an average period of five years.

This study indicates that both nontoxic and toxic goiter occurs later in life in nongoitrous localities than in sections where the disease is more prevalent.

The following tables show the results after quinine and urea injections:

	Relieved—Average	Improved	Not Improved
Exophthalmic goiter	85 4 mos.	15	0
Nonexophthalmic goiter	84 2 mos.	10	6

	Cured—Average	Improved	Not Improved
Exophthalmic goiter	80 5 mos.	15	5
Nonexophthalmic goiter	75 4 mos.	12	13

Two patients suffering from severe toxic goiter, with exophthalmos of several years' duration, received only slight benefit; later, a lobectomy was done, without affording additional relief. Four exophthalmic patients were pregnant between two and four months; relief from hyperthyroidism followed the injection, and they went to term without there being a recurrence and had normal deliveries.

The number of patients cured is highest in the group of those who came for treatment early in the disease; the benefit received by those who came later was in proportion to the degree of damage done to the circulatory and nervous systems. A goiter that once has disappeared has never recurred. A majority of the patients in this group have been under observation for from two to four years.

The quinine and urea injection has limitations the same as any other treatment for goiter and can be employed only in selected cases. The treatment of the exophthalmic type in young adults is very difficult and should be attempted only under

the most favorable circumstances. If the best results are to be secured hyperthyroidal patients must have at least a year of mental and physical rest after treatment.

VISCERAL CRISIS OF THE ANGIO-NEUROTIC EDEMA

In *The Journal of the Tennessee State Medical Association*, there appears a highly instructive discussion of a case of visceral crisis, due to angioneurotic edema, that merits attention. A young unmarried woman, twenty-one years of age, consulted Dr. J. L. McGehee about a pain in the left iliac region, remittent in character, the exacerbations occurring at irregular intervals throughout the day, but, always much more severe at night, and at about the same hour every night. The attacks of pain were always accompanied by nausea and severe headache, the duration of which was from a few minutes to an hour. The radiation of the pain was, at

times directed upward over the crest of the ilium and at other times down toward the bladder. These attacks of pain, she explained, would vary greatly in severity, from the slightest discomfort to the most excruciating type, and simulated the passage of a renal calculus. The bowels had been constipated since the onset of the illness, two weeks before. Purgatives afforded no relief. The taking of food, solid or liquid, into the stomach precipitated an attack. Liquids were better swallowed than solids. Her temperature was 99° F., and the pulse was 88. The catheterized urine contained an occasional red blood-cell, but, gave no leukocytic response.

This symptom-complex being, as the author expresses it, bizarre and impossible to correlate, cystoscopic examination was undertaken; but, with negative results. A vaginal examination, at which the hymen was ruptured, likewise failed to disclose anything abnormal; but, afterward, the skin of the lower abdomen that had been subjected to pressure and irritation during

the bimanual examination displayed the characteristic wheals of a urticarial rash.

Here there was a cue, and the probability of a visceral crisis of the erythema-group of skin diseases became manifest. Acting upon this theory, the patient was placed upon hyoseyamine, 1-100 grain, and monobromated camphor, 2 grains; and this relieved the condition in eight or ten hours, the action of the remedies being exerted in part in a purgative effect. A recurrence of the attack, five or six days later, was relieved within an hour by one dose of the same remedies, and at the end of two weeks there had been no further return.

This case is of interest, for the reason that similar crises have caused patients to be subjected to laparotomy, on the suspicion of their having appendicitis or intussusception or obstruction of the bowel. It should be kept in mind that, as Osler says, one of the most constant features of this whole group of diseases (namely, of visceral crisis of the erythema-group of skin diseases) is, the recurring attacks of colic, sometimes with vomiting, sometimes with diarrhea, and occasionally with the passage of blood.

INTRAHEPATIC INJECTIONS OF EMETINE IN LIVER ABSCESS

In *The Calcutta Medical Journal* for January last (Cf. *Ther. Gaz.* July, 1917), Ghosh strongly maintains that all amebic abscesses of whatever size must be evacuated. Similarly, Rogers has pronounced this procedure advisable prior to making hypodermic injections of emetine, in which he is supported by other writers, who assert that liver abscesses do not yield to emetine treatment unless they first are drained out. This being so, Ghosh very logically suggests that, if the aspirator has to be used, it would be best to throw into the cavity a quantity of dissolved emetine and thus bring it into more or less direct contact with the amebas, without entailing additional risk or annoyance to the patient, but, rather, presenting the possibility of a more rapid recovery.

In employing emetine in this manner, it is possible to utilize a stronger solution than for hypodermic injections; no toxic symptoms having to be feared, even from doses as large as 1 1-2 grains or even more. The absence of danger from large doses, used

in this manner, is proven by the clinical experience of Ghosh, who, basing thereon, declares that the results achieved justify the adoption of this plan of treatment in all cases of amebic abscesses of the liver.

THE HYPODERMIC USE OF LOBELIA

In a brief but meaty article communicated to *The Eclectic Medical Journal* (Oct.), Dr. Cloyce Wilson calls attention to the fact that the physiologic action of lobelia preparations, hypodermically administered, differs somewhat from the action when given by mouth. A study of bedside conditions showed these effects to result: The patient feels a tingling over his body, accompanied by slight giddiness. The pulse is, at first, increased, and later becomes slower and of a fuller volume. There is more or less pallor. The skin is moist and profuse sweating may occur; nausea occasionally, but, not always. Vomiting seems to occur in those patients who have recently taken food, or who may have a more or less marked gastric lesion. After the nausea or also in case it is absent, the patient becomes relaxed and experiences a sense of well-being; if pain be not too severe, he will fall asleep.

Doctor Wilson has employed lobelia, hypodermically, in case of hysteria, hysterio-epilepsy, neurasthenia, convulsions of childhood, diphtheria, and asthma, in most of which there followed decided improvement and even recovery. In one case of cardiac asthma, however, there was little improvement, if any.

The author draws the following conclusions: (1) Lobelia, hypodermically, is a pain-relieving agent second only to morphine and in some cases better; (2) it is a stimulant of the heart and nerve-centers; it strengthens the systole and lengthens the diastole; (3) Lobelia, hypodermically, is a systemic antiseptic and antitoxic; (5) the secondary effects of lobelia, hypodermically, are relaxant and narcotic.

In the discussion of this paper, it was brought out that lobelia has been employed, with excellent results, in puerperal eclampsia, also in trifacial neuralgia. Attention also was called, very properly, to the necessity of attending to all indications presented in a given case; that, for instance, in asthma it was essential to establish good elimination, and that, in fact, neither lobelia

nor any other drug can be used as the be-all and end-all of treatment, but, only for its own special indications, while the entire symptom-complex present must be given complete attention if the patient is to be relieved of his ill health.

ABORTIVE TREATMENT OF ACUTE GONORRHEA

Surely, few diseases are of greater personal, familial, and socioeconomic importance than is gonorrhea, with its harmful effects upon the patient himself and on his or her marital partner, besides, especially, its pernicious destructive influence upon the eyes of their newborn offspring. When, therefore, a method of aborting the acute disease and of terminating it in the course of less than one week is offered in good faith by a physician who enjoys the confidence of his colleagues, it should be investigated with great care and faithfully tested.

Thus, in *The Urologic and Cutaneous Review* for July last, Dr. Saul Steiner, of New York, expresses his conviction that under certain favorable conditions the abortive treatment of specific urethritis is possible. Of course, one will have the best chances for success, when the patient presents himself during the first twelve or twenty-four hours of the attack, or, within three and five days after his exposure, and at a time when the gonococci still are located superficially, have not as yet passed beyond the fossa navicularis and have not penetrated deeply between the epithelial cells.

It is a condition for success that the mucous membrane should not yet be markedly inflamed, the urethral discharge should be mucoid or watery, the patient should feel only a tickling or itching sensation at the meatus, and in the secretion extracellular gonococci should be present—their being found in an intercellular position materially lessening the chances for success.

For cases in which all these conditions obtain, the author employs the treatment below, as described by himself:

"I first explain my treatment to the patient, in order to have his consent, which is necessary. I make sure that I can have the patient at my office three times a day for two successive days. When all these

conditions are satisfactory, I proceed to the treatment.

"First the patient empties his bladder; the lips of the meatus are separated and washed with a solution of bichloride. From a percolator containing 1000 mils of a solution of permanganate 1:3000, a stream is directed at the meatus, the lips of which are separated. This completes the cleansing of the meatus of any discharge or secretion containing gonococci. I prefer the percolator to the Janet syringe, because with it I can better regulate the pressure of the fluid and can get an even flow of 100 mils of fluid into the urethra.

Next, the anterior urethra is irrigated, gradually going deeper, up to the cutoff muscle, leaving space between the rubber nozzle and the meatus for a return flow, for this irrigation, 500 mils of the solution is used. The other 500 mils is injected into the bladder, when I can make the patient pass the urine without discomfort. The reason for going deeper than the anterior urethra, although the posterior urethra is not affected is, to prevent posterior urethritis, in case of failure, by making this part of the canal an unfavorable soil for the reproduction and multiplication of the gonococci. If the patient is nervous or too sensitive, the attempt at going into the deep urethra is abandoned and the whole 1000 mils is used for the anterior urethra only.

Immediately thereafter, an anterior injection is made with 5 mils of a 10-percent argyrol solution, using an air-bulb graduated syringe, and instructing the patient to hold it in for ten or fifteen minutes when he lets it ooze out without forcing it.

Then, a wick of cotton $\frac{3}{4}$ of an inch long is soaked in the argyrol solution and inserted into the meatus, the glans is wrapped up in cotton and tied loosely with a bandage; a suspensory-bandage with a flap that holds the penis horizontally is applied, and, finally, the patient is instructed to get up from the table without straining his muscle. In this way it is sure that at least 1 or 2 mils of the fluid remains in the urethra. The patient must not pass the urine for six hours, after which he comes for the second treatment. If the patient receives his first treatment at night, he should avoid urinating all through the night.

"The second and fourth treatments are the same; the fourth being made twelve hours after the second. The third treat-

ment, six hours after the second, consists of an irrigation with permanganate only.

"After this, the patient is regularly irrigated with permanganate solution twice a day, without using the argyrol. If after three days the gonococci still persist and the discharge increases, the abortive treatment is abandoned and the patient is put under the routine treatment for acute anterior gonorrhea. With this method, I have been fortunate enough to abort the disease inside of four to six days."

Doctor Steiner calls attention to the deplorable ignorance prevailing, especially among young men, concerning the seriousness of possible dangers from neisserian urethritis, and suggests that they should be informed of the importance of reporting for treatment at the very earliest. Patients who present themselves at the time when abortive treatment no longer offers hope for success should be told that they might have been relieved much more rapidly if they had come sooner.

While admitting that Doctor Steiner's treatment is excellent, we have an abiding faith in the superior bactericidal power of Dakin's antiseptics, particularly Chlorazene and Dichloramine-T. The former, in 0.5-percent watery solution, makes an ideal irrigating fluid, while the latter is eminently suitable as a followup application; since, being oleaginous, it is soothing to the mucous membrane.

Furthermore, we miss any suggestion for systemic treatment, which, however, we consider of greatest importance. Saturation with calcium sulphide will go far toward making the blood and lymph of the subject so unacceptable to the invading cocci that they will soon be eliminated. Flushing the urinary passages, maintaining free elimination, and advising general dietetic precautions will aid in hastening the recovery.

FOOD INSPECTION IN CINCINNATI

For those interested in public health matters, the article in *The International Clinics* (1917, vol. 3) by Landis has an important place. He gives in some detail the trials and tribulations of the health officer in his effort to bring about the proper protection of perishable foods. He points out that the greatest obstacle to progress in this, as in other public health measures,

is, the political system prevalent in most of our large cities. As to the business man, Landis is convinced that he has undergone a radical change and is now desirous to conform to the health regulations.

The results obtained in Cincinnati have been highly satisfactory. Comparatively little time is now required in the police courts, where formerly it was an everyday affair.

IMPORTANCE OF POSTURE IN LABOR

In a discussion at the West End Medical Society of Louisville, Kentucky, Dr. J. E. Helms (*Ther. Gaz.*, July, 1917, p. 467), cites an instance of common sense applied in the practice of obstetrics that is so instructive that we reproduce in full:

"As to common sense in obstetrics, I should like to cite an example occurring several years ago: Doctor Barbour, who was then professor of obstetrics in one of the medical schools of this city, sent two students to attend a multiparous woman in labor. They failed to accomplish delivery and sent for Doctor Barbour. After examining the woman, he concluded that delivery was impossible and asked me to see the patient and bring my craniotomy instruments. It was a face-presentation. The patient was a large phtoric German woman with a pendulous abdomen and roomy pelvis; but, the child was impacted and it was impossible to introduce the hand in order to turn it.

"The instruments were ready, the woman was anesthetized, and Doctor Barbour was about to begin craniotomy; but, before doing so, I suggested that the woman be elevated so that just her shoulders would rest on the bed, to see if there was not enough 'slack' in the abdomen for the child to recede. At first he was averse to doing this, saying, he had never heard of such a procedure, but, finally agreed to give the method a trial. The woman's nether extremities were drawn over the footboard of the bed, and we then had no difficulty in reducing the impaction, applying the forceps, and completing the delivery. The child thereupon was born alive and is living today.

"This case is cited merely to illustrate what may sometimes be done by the exer-

cise of judgment and common sense. To have treated that case according to our book-knowledge, or what the books teach us, would have meant sacrificing the life of the child and perhaps also that of the mother."

PITUITARY EXTRACT FOR INDUCING AND SHORTENING LABOR

In an article on the subject mentioned in this title (*Med Rec.*, Aug. 11, 1917), Drs. Arthur Stein and Henry Dover recommend the employment of small doses of pituitary extract frequently repeated for the purpose of strengthening uterine contractions; saying that, with the observation of certain precautions, it also is serviceable for inducing labor at term. The authors summarize their interesting discussion as follows:

1. The best mode of administering pituitary extract is by the intramuscular injection of an average dose of 2 or 4 minims.

2. The solution, in small doses, should be employed in labor at term, exclusively; never for inducing abortion or premature labor, where it fails completely.

3. The preparation is indicated after the onset of labor, for strengthening the uterine contractions; also, in combination with castor-oil, for inducing labor at full term.

4. Pituitary extract constitutes an efficient aid to the bougie when employed for this purpose.

5. The judicious use of these small, entirely harmless doses of pituitary solution serves to reduce the need for employing the forceps, thus causing otherwise instrumental deliveries to terminate like normal progressive labors.

THE FORCEPS OR PITUITARY EXTRACT?

Dr. W. A. Gartner declared, before the Kansas Medical Society (*Jour. Kans. Med. Soc.*, July, 1917), that he considers the use of the forceps in uterine inertia to be far better than the use of pituitary solution. First, because one is sure to make delivery with forceps; pituitrin may fail. Second, with the forceps one does not bring the head across the perineal floor as fast as pituitrin will if uterine contractions are

greatly stimulated by it. Third, one will not necessarily get an hourglass contraction and retained placenta with forceps; but, one is very apt to have both with pituitary substance.

However, Doctor Gartner still carries ampules of the pituitary solution in his obstetric bag. But, if he uses it, it is after delivering the placenta, and with the intention of checking hemorrhage by increasing uterine contractions, as he used to employ ergot.

Opinions differ. Properly used, pituitary solution has been found superior to forceps, by many obstetricians, for the purpose of terminating labor rapidly, when indications for this were present. Both measures need to be used with a large dose of brains and with fine discrimination. Both are reasonably safe—in experienced and expert hands.

VAGINAL IRRIGATION WITH LACTIC ACID DURING PREGNANCY

Some three or four years ago, Doctor Schweitzer recommended the systematic irrigation of the vagina with diluted lactic acid in the case of women troubled with pathologic secretion. H. Thaler and H. Zuckermann. (*Monatssch. f. Geburtsch.*), after following this advice in 153 cases, are greatly pleased with the results observed. In a large proportion the pathologic secretion becomes normal, while the morbidity of those thus treated is materially diminished. The lactic acid is employed in a 5-percent solution.

ERGOT IN ASSOCIATION WITH PITUITARY EXTRACT

As the physiologic action of the posterior pituitary lobe is better understood, its position in the armamentarium of the obstetrician is becoming more definitely established, and among other points worth while knowing is the fact that the doses at first suggested were larger than necessary, one-half or even one-third mil (Cc.) of the standard solution being quite effective, while at the same time less likely to work harm. It goes without saying that pituitary extract (posterior lobe) need not be given as long as labor progresses favorably, and that, indeed, it has no place in normal labor. However, when uterine inertia

supervenes, while cervical dilatation is almost or quite complete and there is no obstruction to the descent of the head, then pituitary preparations are indicated.

A valuable point that has been made repeatedly, for instance, by Dr. G. A. Hartsell in *The Charlotte Medical Journal* last July, is, that ergot acts as a corrective of the tumultuous uterine pains sometimes following upon pituitary administration, and that it should be given for the purpose of steadying the excessive contractions, as also to prevent postpartum hemorrhage.

MUSTARD-OIL INHALATION FOR TOOTHACHE

A recent writer in the *Muenchener Medizinische Wochenschrift* makes known what he pronounces a prompt cure for toothache, this consisting simply in shutting the eyes tight and then sniffing good and well upon a small vial containing volatile oil of mustard. The relief is asserted to be almost instantaneous, after the certainly very unpleasant byeffects have passed away. Also, the excruciating pain caused by inflammation of the middle ear is stopped by a single such inhalation. Of course, the relief is merely temporary, helpful though, until proper curative measures can be carried out.

Without wishing to cast doubt upon this report, the Abstractor is reminded of a little anecdote told by his father half a century ago, as a takeoff on Homeopathy. A wealthy Englishman visiting in Paris called upon a fashionable Homeopathist to get cured of an obstinate facial neuralgia. The great doctor held a little vial under his nose, bade him to smell upon it, then pompously announced: "You are cured!" Asked for his fee, the doctor said, "Ten louisdore." Thereupon the unconvinced Britisher pushed his purse under the doctor's nose and said: "Smell! You are paid."

ON THE TRANSPLANTABILITY OF HETEROGENOUS AND HEMO- GENOUS TISSUES

In an article published last year (*Beitr. z. Klin. Chir.*, p. 235), G. Schoene discusses his further observations on his experimentation (conducted for some time) on the transplantability of normal tissues from one individual to another, and in this

connection he claims credit for having definitely established the fact—through his thorough theoretical and experimental studies—that such transplantations succeed only between blood-related animals, that is, of the same species, which means, also, from man to man.

Schoene's latest, more specifically confined experiments in this direction have developed some extremely interesting, positively established facts, which cannot but prove of practical value in this field: these, briefly, being enumerated by him as follows: The transplantation of tissues succeeds, and ensures its permanent survival, from mother to offspring, and sometimes reversely, from offspring to mother; they can be successfully transplanted from the father to his offspring, but not *vice versa*; success is attained oftenest and most easily between the offspring of the same parents.

This line of research, Doctor Schoene concludes, is only in its inception, and, so, the laws involved can not as yet be clearly surveyed; nevertheless, one practical suggestion already can be ventured: before a surgeon endeavors to transplant any organ, such as portions of thyroid gland, he first should make several trials with patches of skin, in order thus to discover the individual best suited as donor.

CALCARIOUS ABARTHROTIC GOUT IN A CHILD

At a meeting of the Society of Physicians of Vienna, Doctor Schramek exhibited a 9-year-old girl who for three years had been afflicted with hard, painless tumors (some cherry-sized) on the hands and elbows. (*Wien. Med. Woch.*, 1916.) These tumors exhibit a yellowish-red coloration, and some of them break and discharge a yellowish-gray mass consisting principally of carbonate and phosphate of calcium. The Roentgen-pictures proved the bones to be unaffected, while histologic examinations showed that these concretions are deposited in the connective tissue; but, any pathologic alterations in the latter were not apparent.

It is plain that the child is suffering from calcareous abarthrotic gout, a disease of which but few cases are on record. While other observers have mentioned the presence of phosphaturia, this does not exist in the present instance.

Miscellaneous Articles

Studies on Food Economics

IX. —Vegetarianism.

IN the forepart of this work we said: "In the order of creation, the vegetable kingdom preceded the animal, and, the dividing line between vegetable and animal life is as follows: Vegetables are capable of obtaining all they require for their existence solely from the mineral world; whereas animal life is entirely dependent on organic life, not only for existence, but for all life-processes; *omne vivum ex vivo*."

Doubtless, at first, animal-life depended solely on vegetable nutrition; likewise man, at first, was a vegetarian. Even to this day, the vast majority of mankind are more vegetable- than flesh-eaters.

As it looks today, the production of flesh for food is not keeping pace with the increase of population all over the world. We believe that flesh-eating is a departure from primitive innocence and is merely a transitory barbarism, to be ultimately superseded by a return to vegetable feeding, when once the preparation of food by cooking is better understood.

Another fact we note with regard to vegetable feeding is this: The majority of our medicinal remedies are derived from the vegetable kingdom. We will mention but a few, and those in everyday use as foods. Does one desire more red blood, which owes its red color to iron? In spinach, he will find an ample supply. Should there be an insufficiency of calcium in his makeup, he can resort to asparagus for an additional amount. Does he require a laxative, he need not resort to the mineral laxatives, for, in the bean, there is an abundance, while in Brussels sprouts he will find an ample supply of magnesium. Further, in the delicious pineapple, we find combined that most valuable remedy, iodine. Has anyone a tendency to dropsy, he will find an onion diet a great remedy. Or, is one afflicted with biliary calculi and colic, then

let such a one use freely black radish and carrots.

Is there a tendency to insomnia, or sleeplessness? The succulent lettuce will be found a somnifacient hypnotic of no mean power.

In this connection, we feel impelled to call attention to the many highly intellectual and noted persons that have become vegetarians. Perhaps the most famous vegetarian in the world today is George Bernard Shaw. Mr. Shaw is tall, robust, and healthy, has a ruddy color, clear eyes, and an elastic gait. He says: "There are two sorts of mankind: Those of higher and those of lower character. The lower craves meat. I do not like meat and never did." Also: "Daniel was a vegetarian, and after a time he became very handsome. That struck me at the time; I am not sure that it did not have something to do with my views."

Miss Marie Corelli is another English vegetarian of literary fame. She is a vegetarian because of her aversion to killing; the thought of taking life to satisfy the appetite is shocking to her. One has only to see Miss Corelli to realize that meat is not at all necessary to an appearance of roundness and perfect health, for, Miss Corelli is as plump and rosy as a child.

The Countess of Warwick adopted vegetarianism about a year ago, and people conjectured a good many motives for the action of this beautiful noblewoman. Some say she made the change for the sake of her beauty and figure, others, because of religious scruples, and still others, because she finds that her wits are clearer on a vegetarian diet. It is to be supposed that the reason first named has a good deal to do with it, and that Lady Warwick viewed with dismay the rapidly increasing flesh that threatened to destroy her beauty. Since she adopted vegetarianism, she has lost many

pounds and has regained her former slenderness and loveliness.

There are three famous French actresses who have, within the last ten years, become strict vegetarians, and one and the same motive prompted each one—the preservation of beauty and slenderness. They are: Réjane, Sarah Bernhardt, and Cleo de Mérode.

Madame Bernhardt does not eat even eggs, as they are a form of flesh food, and she takes no chances. She sticks to a simple, though widely varied, diet of dried and fresh fruits, nuts, cereals, and vegetables. Her only beverage is cool spring water.

Religious feelings solely have prompted three other famous women of Europe to give up the flesh of animals as food. They are Princess George, of Greece, who was Marie Bonaparte, of Paris; the Grand Duchess Serge, of Russia; and Madame Dieulafoy, the famous archeologist.

Auguste Rodin, the sculptor, became a vegetarian when he found that he could do much better work on a fleshless diet. His imagination worked more clearly and the general tone of his productions was higher.

Much the same motive prompted Madame Maeterlinck (Georgette Leblanc) to renounce the flesh diet.

In America, there are many famous vegetarians. Indeed, vegetarianism has of late spread among intellectual Americans to a surprising degree, owing chiefly to the advice given by certain scientific men, including Doctor Chittenden, of Yale, and Horace Fletcher. Doctor Chittenden asserts that the flesh of dead animals is not fit to enter the human stomach, that as soon as the spark of life goes out of an animal's body putrefaction begins, and one takes into the body matter in a greater or less degree decayed. So great a foothold has vegetarianism obtained that Congressman Longworth said recently that the increased price of leather was largely due to its spread.

Among the well-known people of the United States who are vegetarians, are Prof. Herschel Parker, of Columbia University, who is again to attempt the ascent of Mount McKinley this summer; Ella Wheeler Wilcox; Florence Morse Kingsley; Grace MacGowan Cooke; Upton Sinclair; Horace Fletcher; Edwin Markham; and Mrs. Robert A. Van Wyck, wife of the former mayor of New York.

Wu Ting-fang was converted while Minister from China, at Washington, and he

has made so deep and careful a study of a perfectly balanced diet that he declares that it will enable him to live to be at least 150 years of age, and perhaps even 200. He says, also, that it has cured him of many ills.

Senator La Follette is an example of a vegetarian politician. He is a rigid follower of a fleshless diet, having been converted to it for health's sake. He finds that he can do twice the work on a fleshless diet that he did before, and his head is vastly clearer. He has never craved meat since he gave it up several years ago.

Just here, we will try and brush aside certain false issues commonly raised concerning man's position in nature, as a feeder.

To our mind, it is not a question as to whether we are herbivorous or carnivorous animals. We are neither! The carnivora feed exclusively on raw meat; the herbivora eat raw vegetable material. The human is *omnivorous*, like the hog, and feeds as one (when he can). However, he stands apart from all the rest of creation, and should be more properly denominated the "cooking animal."

A. T. CUZNER

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IMPORTANCE OF THE PATIENT'S TEETH TO THE PRACTICING PHYSICIAN

Common sense, it seems, would compel any thinking person even without instruction and without inquiring into scientific reasons, to keep his teeth in the best possible condition, inasmuch as his very life depends on it; for, teeth are indispensable for the sustenance of the human body, since without them food can not be prepared for the stomach to utilize. Still, even the practicing physician needs to be reminded, sometimes, that the teeth are essential guardians of health and often by their condition give the first indication of the presence of disease, so that, consequently, they are not to be left exclusively to the attention of the dentist.

At the time of the first dentition, the period of growing of the "milk-teeth,"—from about the sixth to the thirtieth month of age, the physician may be called to attend to a child presenting no more serious symptoms than restlessness, irritability, sleeplessness, the consequences of stoma-

titis, and may find a condition which at first he hardly would correlate with the teeth, as for instance, gastroenteritis, bronchitis, conjunctivitis, blepharitis, eclampsia, meningitis.

The tender age of childhood—sometimes as early as in the tenth month, and up to the school-age—is significant for a disease known as hypertrophy of the pharyngeal tonsil (commonly known as adenoids), which seriously obstructs nasal respiration and interferes with hearing, speaking, and mental development; while the consequent inadequate oxygenation of the blood gives rise to anemia with its many sequels. In many of these cases, if the hypertrophy has not been removed before the permanent teeth appear, the upper jaw becomes narrowed, and, in consequence, the hard plate is abnormally arched; with the further result that the teeth are not properly accommodated and the cuspids are pushed forward out of alinement.

If the distress and the symptoms caused by the adenoids are permitted to continue into the period of permanent dentition (the period between $6\frac{1}{2}$ and 13 years of age), it may happen that developing teeth break through the jawbone sideways and out of line, thus showing that the deformity of the jaw has no tendency toward correction. It is important to know, although sometimes disregarded by dentists, that such irregularly growing first teeth must not be extracted, because they contribute toward the proper development of the alveolar processes and thus correct the narrowness of the jaws, eventually being pushed out by the growing permanent teeth.

That the time and mode of development of the teeth is characterized by conspicuous changes in children afflicted with rachitis (rickets), is too well known for me to dilate upon. Cretinism, myxedema, later, tuberculosis, syphilis, diabetes, certain organic nervous diseases often are complicated with disease of the teeth.

Fortunately, when the children arrive at the school-age, the authorities look so very carefully after the health of those whom they teach, and so insist upon hygiene of their teeth that the children later will profit by their lesson. They will know that, when teeth are not good enough to be used for mastication, the bones and muscles of the oral cavity develop imperfectly, that even the external shape and the beauty

of the face will suffer, because inefficient teeth favor eating mushy food and thus afford no opportunity for a full development of all the facial muscles, because vigorous mastication is an unknown exercise and sport. To the healthy young person, extensive use of the teeth and oral muscles is an enjoyment.

The practicing physician also must not forget that a great number of adults past thirty years of age become afflicted with pyorrhea alveolaris (Riggs' disease), a chronic suppurative condition of the gums and alveoli, one rarely recognized in the early stage and which, in its later progress, detaches the gums from the neck of the tooth and so causes looseness of teeth, foul breath, digestive disorders, and numerous disturbances of an otherwise obscure etiology. There is no doubt that the constant swallowing of purulent matter from the mouth-cavity must cause infection in organs rendered sensitive by overuse or accidental injury and that cases of acute rheumatism, arthritis, endocarditis, nephritis, pancreatitis, duodenal catarrh, and disease of the gall-bladder can be explained as the direct consequence of neglected alveolar pyorrhea.

In addition to the most obvious ailments originating from the teeth, such as pulpitis, periostitis, parulis (ulcerating tumor that even may end in death, if neglected), there are many more conditions of the mouth that compel the physician's attention, and it is of the greatest benefit for the patient that the doctor consult and cooperate in all suitable cases with a competent dentist.

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ADENOIDS: THEIR PATHOLOGY, EXAMINATION, AND TREATMENT

It is only within the last quarter of a century that the medical profession has appreciated adenoid growths as a possible cause of nasal obstruction; and, while Dr. Wilhelm Meyer, of Copenhagen, described these vegetations as early as in 1868, yet, the profession as a whole did not realize their baleful influence upon the health of the child so afflicted until some twenty-five years later.

Pathologically, adenoids are the result of hypertrophy, or overgrowth, of the

lymphoid nodules normally present in the rhinopharynx. When this element alone is increased, the growth forms a soft spongy mass, but, often there is free development of connective tissue along with the lymphoid, and then the growths are firm and resisting. In some cases, atrophy of the lymphoid tissue takes place, and this may progress until the adenoid mass is greatly reduced in size; in consequence, relieving the obstruction in proportion to the amount of shrinking. Some authors believe that this process occurs only late in childhood or in early adult life; however, I know from personal observation that it is not uncommon in the very young.

When there is an abatement of symptoms in patients who have been suffering from adenoids, as they reach womanhood or manhood, I believe it to be due to the increased capacity of the epipharynx rather than to the actual reduction of the adenoid growths.

It is said by some writers that 95 percent of children have adenoids. This may be a rather high estimate, but, there is no denying the fact that a great many of our children are thus afflicted, and that, also, they are encountered in all classes and conditions—among the rich, the poor, the high, the low, without exception. Thus, adenoids being found among all classes would indicate that there is a common causative factor, or perhaps factors.

It is well known that there is a strong tendency in all children to excessive lymphoidal growth. This, together with the irritation produced by gases and dust in the atmosphere, besides, often unduly cold air breathed, may be assumed to constitute the foundation for the excessive growth of lymphoid tissue; if now we add to these bacterial infection, which is almost certain to occur, you have the etiology of adenoids in a nutshell.

I have heard it asserted that adenoids are hereditary, but, I do not believe it. Were it possible for a new race of men to come into existence, free from all taint of heredity, they would most assuredly, acquire adenoids if they were to live in the same environment that children now do. Very rarely, children are born with adenoids, but, how early in uterine life these do develop we do not know; they have been found by me, however, at the autopsy of an infant stillborn at the seventh month

of gestation. If a child passes its fourth year without these growths appearing, in all probability it will not acquire them later.

In general practice, children afflicted with adenoids seldom are brought to the physician before the end of their first year. My own experience has been that the greatest number of cases come under observation in children between the ages of $1\frac{1}{2}$ and 5 years. In a few instances, the symptoms are so urgent that an operation for the removal of the growths must be undertaken at a much younger age. Some physicians have operated upon infants only six months old.

The symptoms in a well-developed case are very plain. A persistent rhinitis—a habitual nasal discharge, now better, now worse—in a child usually is pathognomonic of adenoids. The rhinitis is worse during the winter. In those patients in whom the obstruction is great, the discharge never ceases, but, is worse when the child acquires an acute cold. The child that is seriously affected with adenoids can not blow the nose, its speech is defective, the voice has the nasal quality, and there is difficulty in pronouncing certain words.

In all advanced cases, there is mouth-breathing; this is not always due to large growths; a moderate-sized growth located in a small vault will have the same effect, because of its blocking the upper respiratory passage. The same mechanical obstruction causes the child to breathe through the mouth when asleep, with the consequence that it snores, is restless, and is continually changing position. When this condition has existed for some time, the contour of the face becomes changed and we have what some writers call an adenoid facies. The masseter muscles become so relaxed as to produce drop-jaw. These children have small nostrils and depressed nasolabial folds. Children that have large roomy vaults may have adenoids of considerable size and, yet, have not this adenoid facies. Cough is another symptom that usually is present in these cases; it may be mild or severe, according to the amount of irritation produced in the rhinopharynx. It may, also, be paroxysmal in character in some instances, and thus occasionally has been diagnosed as whooping-cough. A little patient was brought to me,

last winter, suffering from a habitual cough that began two years previously. The child had been treated by several physicians, but, did not improve. The cough always was worse when the child was lying down, keeping it for hours from resting. I found that this patient had a considerable mass of growths, but, there were few obstructive signs, owing to its roomy vault. The removal of the adenoids cured the cough.

Now as to the diagnosis—it is only in rare instances that the diagnosis is difficult to arrive at. The mouth-breathing, the snoring and restlessness at night, the persistent nasal discharge, the disturbed articulation, the inability to blow the nose, the stupid facial expression, the cough, the partial deafness, all go to make up a picture afforded by no other disease. If in doubt after considering the symptoms, clear up the diagnosis by making an examination.

To make a satisfactory examination in a very young child, is not a trivial undertaking. After the child has reached its fifth year, adenoid growths may be diagnosed by the use of mirrors and illumination, but, even at this age it is not always possible. I have seen it stated that certain physicians could make all necessary examinations by this method in children only two years old, however, I should prefer to see it demonstrated. I myself have worried by the hour with these little ones, trying to secure a view that would be convincing, only, in the end, to have to give up in dismay.

During the last few years, I have absolutely discarded this method of indirect examination in the case of children under six years of age and now rely upon the method taught by Professor Gilmore Kerley. I acknowledge that this method is very disagreeable to the patient, also to the parents, if they are present, but, it can be done quickly and the knowledge gained can be relied upon.

After the hands, especially the fingers are made aseptic, with the patient securely held with its arms pinned to the sides, a tongue-depressor or a mouth-gag is placed between the teeth, at right angles to the jaw, and held in place by the left hand of the operator. The right index-finger is then passed up into the rhinopharyngeal

vault and the condition of the latter accurately and quickly determined. The presence of adenoids gives to the finger the sensation as of touching angleworms.

As for the treatment, if the physician has satisfied himself that adenoids are present and that the obstruction is urgent, he should so advise the parents, and tell them that the only cure is, the removal of the growths. But, let it be understood that a cases of adenoids do not require surgical interference. In a certain percentage of cases, the growths are small and do no perceptible damage. Should the child be less than one year old and symptoms urgent, it is best not to attempt radical extirpation. The infant can be relieved by the following method. Have the nurse securely hold the little one; the hand of the operator must be thoroughly clean and aseptic; the index-finger-tip should be covered with two or three layers of sterile gauze. The finger now is passed into the vault and with the gauze-covered tip the soft spongy growth is mashed or crushed or broken up. It is wise to tell the parent or nurse that there will be bleeding, but, this usually is very slight. The adenoid tissue in these little ones is very soft and friable, and, by this operation, and the sloughing that follows, the objectionable symptoms are relieved for a long time. Still, as a rule, within one year and sometimes sooner, the symptoms return and a radical operation should then be performed.

Physicians should endeavor to educate the mothers not to hesitate to have their children freed from these abnormal growths, not only for the relief afforded, but, for the betterment of their general health.

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THE DIAGNOSIS AND TREATMENT OF ADENOIDS

In Doctor Canan's excellent discussion of the subject of adenoids (this issue, p. 61), the treatment of this important cause of ill-health in children has been dealt with in a somewhat scant manner, so, I desire to present for consideration a few additional remarks on the therapeutics of the problem. Before doing so, however, it may

be well first to enlarge upon the question of diagnosis.

The method of digital exploration, which Doctor Canan recommends, is effective, no doubt, and at the hands of an experienced physician or surgeon will afford definite information. Nevertheless, it can not be denied that it is rather brutal and that it serves to arouse in the mind of the youngster a fear of physicians that may never after be overcome. I agree with G. F. Still, who points out, in his book, "Common Disorders and Diseases of Childhood," that this procedure is justified only in the presence of unquestioned indications of existing adenoid vegetations, and then it should be undertaken solely for the purpose of establishing definitely the necessity of surgical interference.

In the course of a clinical lecture on adenoid vegetations in the rhinopharynx (*Internat. Clinics*, vol. VIII, 1903), Dr. J. Morrison Ray demonstrated that a diagnosis of adenoids may very well be made without digital examinations, namely, by exclusion. Ray remarks that one of the most frequent causes of mouth-breathing is, obstruction in the rhinopharynx; so, when a mouth-breathing child is presented for a diagnosis of the trouble, the first thing to be done is, to look into the mouth, nose, and rhinopharynx. By careful examination of the mouth, the tongue-depressor being inserted in such a manner as not to frighten the child, the condition of the pharynx can be ascertained, and it can be determined also whether or not enlarged tonsils explain the mouth-breathing. If this examination gives negative results, the nose will be examined with the aid of a small speculum. Supposing, now, that the septum is virtually in the medium line and the turbinates are not sufficiently congested to obstruct the nasal passages, we needs are forced to refer the cause of the child's mouth-breathing to the rhinopharynx. Thus, the diagnosis is made by exclusion, while enough has been discovered for us to initiate a course of treatment looking toward the improvement of the little patient's general condition, which, in itself, may be sufficient to overcome the pathologic state of the rhinopharynx and without surgical intervention.

If a diagnosis of adenoids has been made, whether direct or by exclusion, it becomes

necessary to determine upon a course of treatment. I do not agree with those who maintain that adenoids should be removed at all events, being of the opinion that the attempt should be made to aid the organism in its endeavor to rid itself of the excessive cell proliferation, for the reason that there exists a physiological tendency in the body to counteract any abnormal events and developments. Moreover, it is to be taken into consideration that lymph-cell proliferation is peculiar to early childhood to such a degree that it may almost be called normal at that stage, and that there is a tendency for it to diminish during puberty.

It has been found quite possible, by means of suitable nonsurgical treatment, to enable the body to rid itself of excessive lymph-cell vegetation, and many times such growths have been seen to become smaller without resort to operation. Naturally, this takes time, and, so, the necessity for operative interference may arise in cases in which the adenoid growths are so bulky as to interfere with the normal functioning of the upper respiratory passages. As long as they do not impair the health of the child, however, their operative removal is not called for.

This position is strengthened by the peculiarity of the child's organism that under the influence of excessive lymphoid proliferation, it is especially sensitive to shock from anesthetics. Yet, an operation for adenoids should never be done without giving an anesthetic, because it is a brutal operation, at best. The giving of the anesthetic by no means is without danger, and many cases of sudden death are on record which are to be attributed to shock from the anesthetic; this being true especially for subjects of the so-called status lymphaticus. It follows that before operation is undertaken efforts should be made to remedy the existing abnormal conditions in other ways.

According to G. F. Still it is to be remembered that both the rhinopharyngeal and the faucial tonsils undergo involution after puberty, and this even where there have been catarrhal or inflammatory symptoms which might be thought to entail fibrous changes in them. While, no doubt the presence of such fibroid inflammatory changes renders the involutionary process after puberty less than it

otherwise would be, the occurrence of two or three attacks of tonsillitis, or of repeated "colds," as so often happens in those with adenoids, does not preclude the possibility of considerable diminution in the size of these structures after puberty.

If, therefore, adenoids or tonsils are producing no symptoms or are associated with symptoms not of serious gravity, there is no occasion to rush into operation.

It may happen that further enlargement of these structures occurs and produces symptoms that make the operation necessary; but, at any rate, the harm of waiting until this occurs is less than the harm of performing an unnecessary operation.

This position is well supported in medical literature. Thus, Forchheimer was of the opinion that, if the patient is not in good general condition or is anemic or a bad feeder, proper treatment should be instituted, this consisting in the internal administration of creosote or syrup of ferrous iodide, either one or both, and resulting in diminution in the size of the external lymphatics, possibly also of the adenoids; besides, usually within forty-eight hours, in increased appetite, thus rendering the use of codliver-oil unnecessary.

Forchheimer adds, however, that the great improvement which usually follows this medication frequently tempts to postpone operating. In his opinion, this is not to be encouraged when the other external conditions are favorable, as the child now is in the best condition to bear the appreciable loss of blood always incident to operation.

According to the late Dr. A. C. Cotton ("The Medical Diseases of Infancy and Childhood," 1906, p. 230), when the adenoid is small or appears as a somewhat acute growth, medicinal and hygienic treatment may arrest its development or, even, occasionally cause marked shrinkage. Guaiacol carbonate, 1 to 3 grains four times a day; syrup of ferrous iodide, 5 to 15 minims, three times daily; or syrup of hydriodic acid 15 to 60 minims three times daily, may be given during alternate weeks for a period of several months. Anything, Cotton continues, that tends to interrupt the vicious circle of which adenoids form

a part retards by so much the latter's growth; hence, protection from catarrhal infections by attention to clothing, climate, and ventilation must be secured, together with prompt treatment for the relief of acute angina and rhinitis. Nutrition must be maintained to the highest degree by the best-known hygienic measures, special attention being directed toward any tendency to rachitis and other nutritional disorders. In this connection, the services of the physician are rarely more valuable than during convalescence from the contagious diseases of infancy and childhood.

The question of early orodental surgery, to correct facial, palatal, and nasal deformities due to prenatal or hereditary influenza, seems worthy of consideration in this connection.

Layton (*Lancet*, 1914, vol. I, p. 1106) expresses objections to indiscriminate operating for adenoid vegetations, claiming that it is better, when possible, to remove the cause of the enlargement and inflammation. He recommends attention to teeth and exercises for nasal breathing, finding that often operation becomes unnecessary. Ashby (*Brit. Med. Jour.*, 1913, vol. I, p. 1159) believes that adenoid hypertrophy is an attempt to make up for deficiency in the other lymphoid tissue of the body. Accordingly, he has treated these cases with lymphatic-gland extract and believes he has obtained good results. Stewart (*Brit. Med. Jour.*, 1913, vol. I, p. 1157) reports good results from x-ray treatment. Netter (*Internat. Med. Ann.*, 1914, p. 29) has found nasal injections of a 1:100 colloidal silver solution successful in children who were suffering from adenoids.

No matter what has caused the occurrence of adenoid vegetations, they very soon become subject to bacterial localization, with its resulting toxemia. Even this may be sufficient to account for the clinical symptoms. Unless the adenoid growth is excessive, it is proper to attempt medicinal and general treatment; calcium sulphide, to overcome infection and intoxication, supplemented, if necessary, by echinacea, and also other preparations of calcium. The purpose is, to counteract excessive proliferation of the lymphatic tissue. Iodine, also, may be given for this purpose; while for the alternative

effect guaiacol and other creosote-preparations have been recommended.

It goes without saying that in cases of bacterial infection and intoxication suitable bacterins are indicated, for the purpose of allaying inflammation and other abnormal conditions resulting from the invasion and localization of pathogenic microorganisms.

At all events, it is incumbent upon the attending physician to ascertain and remedy all those abnormal factors that may stand in causal relation to the occurrence of adenoid growths. It has already been said that carious teeth may be productive of lymph-gland enlargement; it having been found that in mouth-breathing children it is exceedingly frequent to find carious teeth and decayed stumps. In such a case, the removal of the adenoid vegetations, without further attention, manifestly would not be productive of much good. Proper treatment of faulty teeth and of diseased gums and the removal of teeth and stumps that can no longer be repaired may be all that is required to restore the child to health.

Finally, the possible luetic factor in the etiology of adenoids must not be lost sight of. Quite recently Professor Marfan, of the medical school of the University of Paris, reported that in a series of 57 cases of adenoids in infants under two years of age congenital syphilis stood in causal relation in 28, and it was a probable factor in 16 others.

When careful and sufficiently prolonged medicinal and general treatment is ineffective toward relieving the abnormal conditions due to the presence of adenoid growths, or when these give rise to symptoms that indicate injurious consequences to the health or welfare of the patient, surgical removal must be considered. This is true, especially if the growths cause trouble in the auditory, respiratory or nervous systems, as for instance, recurring earache, and, still more, the slightest degree of deafness, even if it recurs only when the child has a cold. In very young children, adenoids should be removed if nursing or proper feeding is interfered with; if some of the symptoms referred to already are in evidence or if development is markedly impeded.

Operation being determined upon, it should be held in mind that the surgical

treatment of adenoids is not a simple operation and that it may cause a great deal of bleeding. The technic of the operation does not concern us here; suffice it to assist that it should be perfect in every way. As to the anesthetic, however, I wish to suggest the advisability of employing the nitrous oxide and oxygen anesthesia as most suitable for this operation. This, in view of the fact that ether and, in a less degree, chloroform have not infrequently given rise to collapse and even death in cases of the status lymphaticus. It is further suggested to consider the advisability of employing the hyoscine-morphine combination, instead of a volatile anesthetic, as being, perhaps, even less dangerous than the nitrous-oxide and oxygen gas. In this event, however, the child's tolerance to morphine should be ascertained before relatively large doses of this alkaloidal combination are administered.

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EXPERIENCES WITH LOBELIA

As for experiences with lobeline, which you call for, I have had none in my practice, but, in the words of our good "cousin," the druggist, I can give you something just as good—that is to say, my experience has been with the subculoid lobelia. Let me cite from my case records.

Case 1. On June 28, 1915, I was called to see Miss B., aged 34, clerk, family history negative. Two weeks before that she was seized with a pain in the back of her head. The next morning, she had an attack of hematuria, accompanied by severe pain when urinating. This pain continued, and there was a constant urge to urinate, the longest possible that she could hold her water being twelve minutes. On the morning of June 27, she had a chill, which lasted an hour and a half, this being followed by fever and pain in the region of the left kidney. Her medical attendant treated her for grip.

Arriving, I found the patient in a stupor, probably under the influence of morphine. Her temperature was 101° F., the pulse 84, and she was in pain. There was much tenderness over the left kidney. The urine was smoky, acid, contained a trace of albumin, but, no sugar. Microscopical examination revealed: uric-acid crystals,

finely granular casts, motile bacteria, a few red cells, and bladder-epithelium. A colleague whom I took along diagnosed the case as one of colon-bacillus nephritis. My diagnosis was that of pyelonephritis due to calculus.

I administered hypodermically 20 minims of subcutoid lobelia. This gave prompt relief. I also prescribed hexamethylenamine.

The following morning the patient was no better. She had spent a restless night. Temperature 102° F., pulse 80. Again I gave a hypodermic injection of 20 minims of lobelia, and again relief was prompt in about five minutes. At noon, the temperature rose to 103.6 degrees, and the patient again was in agonizing pain. I administered 60 minims of the lobelia hypodermically. In five minutes, the pain lessened and in two hours it disappeared entirely from the region of the kidney; the irritation in the bladder, however, became more pronounced. A blood-count made at this time showed 16,000 leukocytes. The evening temperature was 104 degrees, but, patient was free from pain. The next morning (this being after three days of the lobelia-medication), the temperature went down to 102 and in the evening to 101° F. The following morning, the nurse presented me with two renal calculi passed by the patient during the preceding night, one being about 1-5 inch in diameter and 1-2 inch long, and the other about 1-3 the size. A third stone also was passed, but it was lost. Following this, the patient recovered from this attack, but, was left with a nephritis that required two months' treatment to effect a cure. An x-ray picture disclosed no more stones present.

A long-continued unpleasant symptom that followed the hypodermic injection of a 1-dram dose of the lobelia was that of vomiting, this being aggravated while the patient was removed from her room to the hospital, and which continued throughout the night.

Case 2. On September 10, 1915, I was called to see Mrs. Z, aged 47, housewife. family history negative. About a year ago, she began to be troubled with enuresis, had to get up about five times every night. Three months ago, she had an attack of pain in the region of the right kidney. With this, the frequency of urination in-

creased. Two months later, her pain became worse and assumed more of a colicky nature. For the last ten days, she had a constant desire to urinate. I found her in agonizing pain and unable to urinate, so that I had to catheterize her. Temperature 99.5° F., pulse 80, tenderness over the right kidney. Urine: gravity 1004 (she had been drinking large quantities of water), acid, no albumin, a few bladder-epithelia. Diagnosis: Renal calculus.

I gave her 20 minims of subcutoid lobelia hypodermically; also, hyoscyamine, 1 granule (1-1000 grain) every half hour. This kept the pain under control. On the 13th, I was called again and found the patient in severe pain and very restless. Gave 40 minims of the lobelia hypodermically. This relieved the pain. In the evening, there was profuse hematuria, and with this the pain in the region of the kidney disappeared, but, a sense of heaviness was felt in the bladder which lasted several days. An x-ray picture, taken on the 15th, did not show any stones.

Case 3. Mr. M., aged 42, five years ago had an attack of lumbago, which was relieved by an Osteopath. A year ago, he had another attack, which yielded to local applications. On October 14, 1917, I found the patient complaining of pain in his back, this radiating to the right leg, and being aggravated by movements. When extending the leg and flexing the thigh upon the abdomen, severe pain was felt at about the sciatic foramen. The prostatic gland was found enlarged, soft, and quite tender.

I applied the static wave current over the prostrate gland, which afforded some relief. I did not hear from him for a week. On the evening of the 21st, I was called to see him. He had had osteopathic treatment during the week, with some temporary relief; but, he was making no headway and now the pain was becoming unbearable—he was unable to move. The pain was of a colicky nature and was localized over the right kidney, radiating to the groin and down the front of the right thigh.

I gave him 25 minims of the lobelia hypodermically. The relief was prompt. The pain disappeared and he was able to move. At about midnight, I was called again. I gave him 50 minims of the lobelia hypodermically. This produced some

nausea, which lasted about an hour, but, it relieved the pain and gave him a good night's rest. About 9 o'clock the next morning, the pain was slight. I gave a hypodermic injection of 25 minims of the lobelia. This dose was repeated at about 5 p. m. About 11 p. m. I gave 50 minims hypodermically. On the morning of the 24th, I gave him another hypodermic of 25 minims of the lobelia. The pain was virtually gone, although some local tenderness still remained.

An analysis of the urine, made on the 22nd gave a negative showing, although a considerable number of red blood-cells were present.

I have also prescribed lobelia successfully in asthmatic conditions, but, I believe its use in asthma is too well known to require any report.

LOUIS I. BOGEN.

Lincoln, Nebr.

LOBELINE, MORPHINE, BLOODLETTING IN PUERPERAL CONVULSIONS

Answering the question raised by Doctor Junger in the November number of *CLINICAL MEDICINE* (p. 838), regarding the use of lobeline in puerpal convulsions, I would advise against its use, for several reasons; first, it is not indicated in that disease, and second, its effects are too uncertain for it to be used in such a serious condition, when we have other remedies the effects of which are certain and almost specific.

I would also advise against administering poisonous doses of morphine and other narcotics into a patient whose system is already overloaded with toxic material; and I would especially make an earnest protest against the use of chloroform for controlling the convulsions, for, it can do no possible good and may do an immense amount of harm.

So, then, I would tell Doctor Junger, if he should be called upon to treat another case like the one he describes, first of all to bleed the patient to effect, that is, till the pulse begins to soften a bit. Next, if the pulse remains too rapid, to give a hypodermic injection of Norwood's tincture of veratrum, repeating the dose once an hour till the pulse comes down to normal. Then start elimination by placing about

20 grains of calomel on the back of the patient's tongue. Then give a rectal injection of epsom salt and glycerin in a quart of hot water. If labor has set in, this will hurry dilatation, and empty the lower bowel.

If dilatation is not going on satisfactorily, heat about a pound of petrolatum and dip a 5-yard roll of sterile gauze into it, then with a large retractor and dressing-forceps pack the cervix and vagina full, applying a pad to the vulva, and leave it in for an hour or more. When you remove the packing, dilatation usually will be complete. After using this method once, you will never, never again employ the nasty manual method of dilating a cervix.

By this time, your patient will be free from convulsions and awake. If so, then is the right time for a hyoscine-morphine injection, and, as soon as the effect is marked, deliver your patient. A little later, a dose or two of salithia will leave your patient in good condition.

In a practice of thirty-two years, I have never yet seen a patient have a convulsion after an effective bloodletting, and the beauty of this measure is, that it can do no possible harm. The same can be said for veratrum for controlling too rapid heart action.

W. A. MARNER.

Miles, Iowa.

THE YEARS CREEP SLOWLY AWAY

Emerging from the valley and shadows of death! The mere idea is lugubrious. Have any of you come out? Such is of my recent experience. I have two wounds across and just under the base of the skull, no more penetrating than of the fracture type. Well! I am in the office, but then, this annual greeting nearly passed a blank. I do not know the length of my comatose state. The natives think I was dead. Strange, they did not bury me!

Ominously the dull and heavy thud of eighty-eight years completed in my pilgrimage struck the weird knell tonight.

This greeting took formation a year ago, with Zapata bands devastating and murdering in the hamlet of my paradise home, whose habitants fled, till but a mere shadow of the "Deserted Village" remained.

In February, they sacked my house. To escape being held for ransom, I fled in

borrowed rags to Pichucalco, without hat or shoes, in the night. I had a big stock of medicines in Coast Custom House, which came here at once. Three days later, this city was taken by storm and sacked.

Just at day break, when the rebels entered the public square, firing ceased. I opened my door. No one was near. They were breaking open the stores in the square. I stepped out. There were two men at the lower end of my corridor, some hundred yards distant, in the act of turning to come back. One of them yelled to me: "Doctor, what are you doing in this hell of ——" Then he ran quickly toward me, and grasped my hand with both of his so that it ached for an hour after.

"You don't remember me," he went on, "but, I remember you, because you are little changed, though forty years have passed and we now are here in this sulphurous smoke. I remember the service you rendered a stripling lieutenant of the line in the state of Michigan. I am General De L——, commander of this post. We have taken the city by blood and fire, and the commerce will be sacked; but, you will not be harmed, Doctor Gray—ask of me whatever you wish."

"Nothing, I wish general," I answered, "but personal protection for innocent pacificos."

"Not even civilian employees of Carranza will be molested, and families will not be disturbed," came back. And so it was.

The only inconvenience to me was that I had to fix up the wounded, a matter of two days and a night, I being the only doctor in the place then.

Carranza's troops were dead, only a few wounded ones had escaped in the early darkness. The dead were burned in great heaps in the public square.

The drug establishment of my friend Doctor Maldonado was left completely empty. He was absent with his family, as also were many of the merchants and other prominent people who had fled this section when the Zapata contingents arrived in the vicinity.

The men who took this city were of the upper classes, rallied under the auspices of Felix Diaz, presuming that Carranza was going in alliance with Germany, and that they would attack him in the rear, while the United States pressed the front, finish

him in short order, get recognition, and annul the alliance. But, they were not fifty miles from here when news came of the American declaration of war against Germany and Carranza's rejection of any alliance. Thus stopped the advance and the volunteering. The army broke up into detached bands, while Diaz found it advisable to leave the country.

After that army had left here, not a guard remaining, twenty days passed before federal troops arrived, and a panic of terror that bandits would enter caused the people to flee, until I was the only person remaining who slept in a solidly built central street, nearly a mile long, for fifteen nights.

Since the capture of this city of Pichucalco, the 4th of April, we have passed most of the time practically under a state of siege, owing to river-pirates and the roads being held by, or subject to, rebels, though not menacingly near.

It is now five months that I have eaten no meat, three months since I gave up eggs. My breakfast consists of a small plate of oatmeal, a small biscuit, and a cup of coffee with a teaspoonful of sweetened condensed milk. For dinner, I have three spoonfuls of rice, a yuca tuber—about equal to your potato, a piece each of pumpkin and plantain, a tortilla, and a cup of black coffee. Supper consists of the small biscuit and a cup of chocolate with a teaspoonful of condensed milk. Purely as a question of nourishment, I am more comfortable than any guest of a first-class hotel. I usually eat three or four bananas every day, and an orange occasionally. Hundreds of thousands in this country live on small rations of tortillas and black beans. It is sheer nonsense to suppose that you people in the states are in danger of famine, to which we have been long accustomed.

Should you suffer a proportionate sacrifice of life, in your European struggle, to what the long roll of revolutions has cost us here, you will have at least 3,500,000 of your people dead.

It may be well to imagine this broad Mexican shambles mere child's play; and no more than a daily average of 235 from such far-spreading fields of conflicts does seem small; yet, such loss from a 15,000,000 population through a long lapse of multiplied days, is no bagatelle. The rule has been to take no prisoners; and half the

deaths have been of pacificos, for vengeance.

A universal deluge, that came from the United States and northern Mexico, has held sway here half a month, suspending traffic and military operations, and many people have been drowned.

I really regret that my idealistic possibilities for the redemption of Mexico, as written down three years ago, have failed to materialize; yet, they might have, under a liberal dispensation, eventuated in the hoped-for prosperity of Mexico by today. Our political tendency is hellward, when a few prudent concessions would lead to peace. They are not made, while provocations are never wanting.

Some 20,000 federal troops are in this belt, against Mexico's most formidable revolution of the time, and never yet suppressed. Before the flood, their mountain strongholds, herds of cattle, and vast plantations of corn had been captured and the ammunition exhausted. Now, after a week without rain, the government troops are beginning to move and something serious may happen. From 20- to 30,000 rebels can not live long on mountain solitude. They have no other territory. They can not try to forage.

Loss of blood was my most serious damage. In case my lot and part are in these tragic scenes next year, maybe I shall tell you all something. But, long ere that recurrence you will have sorrow and wo too much at home.

ROBERT GRAY.

Pichualco, Mexico.

[Doctor Gray has passed through so many vicissitudes of war, revolution, famine and other popular upheavals unharmed, that, to us, he seemed to possess a charmed life. All the greater was the shock of learning that he had been wounded. The readers of CLINICAL MEDICINE, who, like ourselves, have come to love the lonely old doctor and who, like ourselves, read his stories, quaint, unusual, and—sometimes—weird as they are, with eagerness, will sympathize with him in the necessity to undergo personal injury in addition to all the hardship he has already suffered. We all extend to him our sympathy and our sincere wishes for better things.

It is to be kept in mind, that "The Old Doctor's Life Story" which is running

serially in this journal, was written several years ago; while this present letter was received only last month.—Ed.]

OPPORTUNITY—LOTS OF IT

The editor of *The Dental Review* has found a gold nugget, a poem signed "B. Braley," while otherwise, without any indication of paternity or birthplace. We do not know, any more than does the editor of our contemporary, where this poem may first have appeared or who B. Braley is. Nevertheless, we reproduce it here, because it is so good that it should be passed on all over the world. Read it and see whether we are not right. The title of the poem is "Opportunity."

With doubt and dismay you are smitten,
You think there's no chance for you, son?
Why, the best books haven't been written.
The best race hasn't been run;
The best score hasn't been made yet,
The best song hasn't been sung;
The best tune hasn't been played yet.
Cheer up, for, the world is young!

No chance? Why the world is just eager
For things that you ought to create;
Its store of true wealth still is meager,
Its needs are incessant and great;
It yearns for more power and beauty,
More laughter and love and romance,
More loyalty, labor, and duty,
No chance? Why there's nothing but chance!

For, the best verse hasn't been rhymed yet.
The best house hasn't been planned;
The highest peak hasn't been climbed yet,
The mightiest rivers aren't spanned.
Don't worry and fret, faint-hearted,
The chances have just begun;
For the best jobs haven't been started,
The best work hasn't been done.

—B. Braley.

MUST HEROIN BE DISCARDED?

I had thought sometime ago that I would say a word about heroin, but, forgot it until Doctor Keller reminded me. I think well of heroin. For years, I have used it many times more frequently than I have either morphine or codeine. I don't think I have given a dose of morphine in five years, except in combination with hyoscine.

Heroin has a marked action in allaying acute irritation of the trachea and bronchi. It soothes restlessness not due to pain. I never get nausea from its use, nor constipation unless in unusually large doses.

I never saw a heroin-addict, although using it at all ages, from birth to old age. I know no drug that I could substitute for heroin; so, let us retain it, for, it is valuable.

A. E. SMITH.

Utica, Ohio.

THE EVILS OF HEROIN

Having carefully read the article, "Must Heroin Be Discarded?" in the November number of *CLINICAL MEDICINE*, and realizing the evils that such suggestions may lead to, I feel it my duty to reply. For several years, I have given all my time to the study and treatment of narcotism, in a hospital wholly devoted to this class of work, and am, therefore, familiar with the uses and abuses of narcotic drugs.

I will admit at the outset that heroin "has been exposed to its periodic attacks;" and, to one acquainted with the evils attending its use, such an "attack" at this time seems appropriate.

At the inception of the use of heroin, it was widely heralded as a valuable palliative for various kinds of irritation of the air-passages; and it was considered a safe drug. It even was suggested as a safe substitute for morphine in the cure of the morphine-habit. When any drug is proclaimed as a safe and sure cure for any disease or class of diseases, it always meets with a kindly reception both from physicians and the laity. This occurred on the advent of heroin.

As compared with morphine and codeine, dose for dose, heroin is three times as strong as the former and six times as strong as the latter. This is not its comparative strength clinically, however.

A larger amount of heroin is excreted by the kidneys than is of morphine; while nearly all of codeine is eliminated by the urinary apparatus. Heroin has less power to promote sleep and to diminish pain than has morphine.

Upon the organs of respiration, it acts as a severe depressant. Heinz says that it is five times as depressing to respiration as morphine and thirty times as depressing as codeine. Experiments with rabbits have shown that the number of respirations were, in forty minutes, reduced, from 120, to 18 per minute; and the volume of inspired air was reduced from 880 C.c. per

minute, to 240 C.c. In many patients, I have observed this depressing effect on the respiration.

I would consider, from my observations, that the active effect of heroin upon the intestines is about that of morphine; while that of codeine is not marked.

The action of opiates upon the heart is not of special moment, and need not be considered here.

The power of heroin to produce reflex excitability is greater than that of morphine.

In cases of heroinism, the physical and mental torpor is more marked than in morphinism and the consequently lowered resistance more pronounced. An advanced stage of narcotism obtains earlier in heroinism than in morphinism and its victims reach a lower state of hebetude in the former than in the latter. I have in mind the case of a strong man, physically and mentally, whose weakness equaled that of one ill with a fever.

In its power to overcome pain, to allay cough, and to induce sleep, codeine is preferable to morphine or heroin, when its effectiveness is considered and its freedom from liability to induce the habit is weighed. While there is a possibility of its inducing the codeine habit, this is not so easily acquired and is more readily broken; but, the danger of habit-formation is always possible when any opiate is used, even in small doses and, for only a short period.

About 10 percent of the several hundred narcotic cases I have treated have been heroin-habitués. The classic symptoms of morphinism, with which all physicians are familiar, are found also in heroinism. The difference as to mental and physical weakness is marked; this is especially pronounced in the latter and, the convalescence is more prolonged.

The power of heroin over pulmonary and laryngeal irritation is conceded; but, here, if an opiate must be given, codeine is to be preferred.

As the heroin-habit is easily acquired, its dangers pronounced and unavoidable, and its victims numerous, it is unsafe even to consider "why discard a distinctive, active, successful therapeutic agent simply because it has been misused by someone, somewhere, three years ago?" To one more familiar with its dangers and having

in mind the number of heroin-habitués, its therapeutic employment will be more seriously considered than in the article referred to. It has all the disadvantages of morphine and more danger; and, the deprivation of heroin is more painful than is the withdrawal of morphine.

The Harrison Law has favorably reduced the number of narcotic victims; and now a duty devolves upon all physicians to see to it that further use of narcotic drugs is kept at a minimum amount. To say that a patient does not know what he is taking, is an unsafe position to take in the use of narcotic drugs, inasmuch as such use may engraft upon the innocent user a dangerous habit, with all the attending evils. An opiate is always an opiate—heroin being the most dangerous and codeine the least so—and is never safe from the standpoint of habit when used for two weeks or more, even in minute doses. Therefore, their employment must always be weighed as to its necessity, which one is to be advised, and the length of time to be given.

GEORGE R. CATE.

Brookline, Mass.

[Doctor Cate advances a strong argument in favor of the position taken editorially last September (p. 625). It seems that physicians familiar with drug-addiction are in favor of abolishing heroin. Are there any more opinions to be voiced?—Ed.]

AS TO LUMINAL IN MORPHINE-ADDICTION

Doctor Price, in the July issue of *CLINICAL MEDICINE* of last year, under the heading of "Morphine-Addiction and Its Cure," makes the following statement: "However, six days later I waked up and found myself in bed." It seems that luminal is a wonderful drug and is capable of producing a deep and a comfortable sleep for a variable length of time, without causing any distressing symptoms, such as delirium, restlessness, or even coma.

However, Doctor Price failed to mention several important facts connected with that sleep; that is, when the patient gets just enough luminal to keep him in a dormant state, (1) whether he must be constantly watched for changes in respiration or circulation, or whether there are any

such changes. (2) How about the urinary and anal sphincters—is there any incontinence of urine or feces? (3) Nothing is said about the feeding; whether he was nourished in that time, and how.

This is not written in derogation. I merely ask for more explicit information, for, Doctor Price's article is interesting and informative, not only to myself, but, I believe, to many other readers of *CLINICAL MEDICINE*.

M. WOLLIN.

Bronx, N. Y.

[Doctor Wollin's letter was referred to Doctor Price, who replied as follows:

"I could hardly state in one short article all that might have been said, and many correspondents have written to me about this treatment, from one side of this continent to the other, and as far away as Korea. I will briefly answer the Doctor as fully as possible.

"1. Yes, there are such changes that must be looked after. I have been in the sanitarium and seen patients go through this treatment since I took it, and have noted many changes. However, there was nothing particularly alarming about it. A lady from Alabama writes me that she took her husband through a course of the treatment and cured him.

"2. The patients get magnesium sulphate when needed. The elimination is kept up as a part of the treatment, and this is attended to by nurses. No incontinence of urine or feces ever was observed.

"3. Patients can be aroused sufficiently to give them food. One patient, who had been overdosed, had to be fed through a tube. Milk, soup, oatmeal is the diet in ordinary cases. Digestion usually is undisturbed and any food that can be swallowed will be digested.

"I wish to explain that I am in no way interested in the treatment of these patients, save to see every one of them cured safely and pleasantly. Furthermore, this is the only treatment worthy of the name. In a few days, you wake up well, and that is all you know about it; and you stay well, and this is the blessed part of it. There were 16 patients in the sanitarium with me; we all went away cured, and more or less have had the consciousness of this pleasant experience month after month since. The remedy seems to be all right in every re-

spect. You never crave another dose of the narcotic."—Ed.]

FEBRILE RECURRENT HEADACHE

In reading Professor Gougerot's article on headache, on page 811 of the November number, I was sorry to find that he had overlooked one of the leading causes of headaches, namely, congestion in the nasal accessory sinuses. This form can be quickly relieved by using a Gradle or Brawley suction-apparatus, while the secretion collected should be examined for the germ or germs causing the trouble, and then the proper vaccine used. Also, the new oil-spray of dichloramine-T would be of value for keeping the fossæ clean. Any physician can employ this simple treatment, which also is very useful in colds. Shrink the turbinates first with adrenalin.

F. A. WIER.

Madison, Wis.

[It is well to keep in mind the cause of recurrent headaches, as mentioned by Doctor Wier. We believe that congestion in the accessory nasal sinuses, especially if owing to bacterial infection, may be a fruitful source of meningeal involvement; and this may give rise to the kind of headache described by Professor Gougerot, especially if the infection is only slight. If it often recurs, or is very severe, decided pathological disturbances in the meninges would have to be expected, with correspondingly severe, and serious, symptoms. Since trouble in the accessory nasal sinuses is almost invariably of bacterial origin, the advice of Doctor Wier, to employ spray-treatment with dichloramine-T, is a very excellent one.—Ed.]

CHRISTIAN-SCIENCE HORRORS

Every day we read in the newspaper about some person who has died, for the lack of proper medical attention, at the hands of one of these so-called healers, not a physician, for, this term means too much to be applied to a class of persons who are so brutal and skeptical that they let people die when they might probably be saved if a reputable physician were called. I wish to tell of a case that occurred here:

A child was taken sick with diphtheria, and, the parents, being of the Christian

Science faith, of course called a practitioner, to use his "spiritual powers" to heal the child. The child died in about forty-eight hours. No report of the case had been made to the health department, nor to any city physician or official. The death was reported by some neighbor. The health department and coroner at once made an investigation and found the child had died of diphtheria. The Christian Science practitioner and his wife, also the father, were hauled into court and asked for an explanation. They said they did not know what diphtheria was, but, that it was not contagious. The father of the child gave some excuse, also.

This is surely a bad state of affairs and some legislation should be forthcoming to put a halt to such barbarous doings. It is high time that physicians get together and impress upon their representatives in legislature or congress to enact laws that would force these Christian Science practitioners and drugless healers to report each and every case of communicable disease to the health-authorities at once, so that the patient can get the proper treatment.

Had the Lord intended for the sick and afflicted to be healed by miracles or by drugless practioners, he would have never instructed the doctors in the temple. The herbs and roots that are turned into our drugs and are administered to the sick would never have grown. There would have been no need for them. Did the Lord instruct Mrs. Baker Eddie to start a new religion—I mean, a comedy farce—that scorns the physicians, that "knocks" in every way possible the medical profession and the drugs? If he did, then the Bible and the religion we have been taught is a mockery.

I had occasion, some time ago, to attend a Christian Science service. A talk was made by one of the so-called practitioners, and he "roasted" the medical profession from A to Z, and in no good terms. My blood began to boil and I got out very quickly or I would surely have connected myself with the so-called practitioner in a way that either he or I should have remembered for some time to come.

In the name of the profession we represent and for the sake of humanity let us get busy and have some law passed that will eliminate this class of people, and, if they let a patient die, see to it that they

are punished in the severest manner. Their ignorance is no excuse, yet, by pleading, they save themselves from prosecution, while also claiming that the Bible is authority for their belief and their practice.

H. SAMPSON.

Gerber, Calif.

PROGRESS IN ANTISEPTICS

For many years after Lister introduced the revolutionary idea of the chemical sterilization of wounds by the use of germicides or antiseptics, the problem was looked upon as a comparatively simple one. The investigator was content if he found some substance which had the power of destroying bacterial organisms. Comparatively little thought was given to the conditions under which the germicide was to be used, except that it was generally realized that it must be employed in a dilution low enough to avoid marked injury to the tissues to be treated, and in quantity small enough to avoid the danger of poisoning from absorption.

From year to year the profession has drifted along, "trying out" one antiseptic after another, without studying carefully the clinical problems which such antiseptic was intended to solve. Then came the Great War. The War has brought us many problems and is helping us to solve many, and one of these is the place of antiseptics in surgery and the conditions under which they may properly be used. Our indifferent methods of study during the last decade were rapidly leading us into surgical pessimism with regard to the value of any antiseptic under any condition. The War, by bringing us more experience, more necessity for careful study, is bringing us accurate knowledge—and a greater degree of optimism.

Probably no man has done more to throw light upon the whole problem of antiseptics than Dr. Henry D. Dakin, of the Herter Laboratory, New York, who early in the war was sent to France by the Rockefeller Institute to study the problem of sepsis from the chemical side, with Doctor Alexis Carrel, who took up the problem from the clinical side. In the little book recently published by Doctor Dakin, in association with Dr. Edward K. Dunham,*

we have a very complete and interesting summary of our present knowledge of this subject. The book is the fruit of the personal researches of Dakin and Dunham, alone and in association with various members of the British Medical Research Committee, with which Doctor Dakin has been associated. We can give here only a very brief outline of the field covered, but, we are glad of the opportunity to refer to the book itself, in which further information can be secured.

"The ideal antiseptic," says Doctor Dakin, "should effect a complete sterilization within its sphere of action, without causing any damage to animal cells." Needless to say, the "ideal" substance of this type has not yet been found, though much progress has been made in that direction. For instance, we know that an antiseptic which has little deleterious action upon leukocytes cannot be highly toxic; that the "ideal" antiseptic should not produce marked irritation; that it should aid in the rapid breaking down and removal of necrotic tissue; that it should favor the formation of healthy granulations; that it should not readily coagulate the protein of the tissues and the wound exudates; that, as applied, its action should be sufficiently prolonged to produce the results desired; that it should have as low a degree of toxicity as possible; and, finally, that it should possess highly antiseptic and germicidal powers.

On the whole, we gather from Dakin's careful study, the conditions are more nearly reached by a group of chlorine-carrying germicides than by any other substances, although it is freely admitted that there are many antiseptics—some old, some new—of very great value, some of these having found by experience to have special adaptability for certain specific conditions.

The oldest and perhaps the best known of antiseptics is phenol, which has had warm advocates ever since Lister adopted it. In a concentration of from 2½ to 5 percent it is still in common use, and, properly used, it gives good results, although it is now generally acknowledged to be inferior to many other antiseptics. It is slow in action and coagulates the proteins of the tissues and fluids. Its efficiency is reduced by the use of alcohol or glycerin as solvents, and when dissolved in vegetable

*A Handbook on Antiseptics. Macmillan & Co., New York. Price, \$1.25.

oils it is almost devoid of germicidal activity.

The cresols are more actively germicidal than phenol itself; in fact, a 1-percent solution of commercial cresol in water is said to be as active as 3 percent of phenol in germicidal strength.

Salicylic acid in various forms has been much used as an antiseptic, but, its disinfectant action is not great. It has a decided coagulating action upon the blood, it is but slowly soluble in water, and its germicidal activity is low.

Picric acid, another antiseptic discussed by Dakin, is also an active protein precipitant, and has the disadvantage of being decidedly toxic. In the presence of serum or wound exudates, it is of comparatively small value.

Of the metallic salts used as antiseptics, the best known is mercuric chloride. Like other metallic salts, it has the disadvantage of being readily precipitated by proteins, so that its high initial antiseptic potency is soon reduced. Perhaps as a consequence of this, its action is not nearly so rapid as is commonly thought to be the case. An interesting fact brought out by Dakin is, that, when used with ordinary "hard" drinking water, its activity is only one-fifth as great as when distilled water is used as a solvent. It is highly toxic.

The silver salts have special indications, but, the discoloration of the skin due to the action of light, and their caustic and coagulant action make them objectionable for many purposes.

Recently much attention has been given to the use of dyes as antiseptics. Perhaps the first to be introduced for this purpose was malachite green, brought to the attention of the medical profession by Fildes, Raichman, and Cheatele. Other similar dye-stuffs considerably used as antiseptics are brilliant green and flavine, or, as the last is often called, acriflavine, this being the most powerful of the group. This is warmly praised by Browning. "One of the most remarkable properties of acriflavine is, that its germicidal action is apparently enhanced by admixture with serum, though greatly diminished by pus. Relative to its bactericidal power, the dye is less detrimental to phagocytosis than most other antiseptics and it has but little injurious action on the tissues, but on the other hand its germicidal action is exerted decidedly

more slowly than that of some commoner antiseptics."

Iodine is one of the most widely used and most useful of antiseptics. It was introduced as a skin disinfectant by Stretton in 1909, and for this purpose is undoubtedly of great value. It has been found much too irritating for repeated application to open wounds, and it is said that severe neuritis has been observed as a result of its use. Its strong coagulating action upon protein is also an objectionable feature. "In general, it may be said that iodine will be found most useful when the conditions are such that rapid and complete sterilization may be effected by a single application, as, in skin disinfection or small surface wounds."

All things considered, the antiseptics which seem to be of greatest value are those of the chlorine group. They act quickly and powerfully; they break down necrotic tissue; they do not coagulate proteins; they favor healthy granulation; and they have a powerful deodorant and oxidizing action; they are relatively nontoxic, and of unquestioned potency and efficiency. The principal objection to the chlorine-carrying antiseptics is, their exceeding rapidity of action, requiring frequent application. This evanescent action is particularly marked in the case of sodium hypochlorite and similar salts of hypochlorous acid.

Chloramine-T (or chlorazene), the second member of this group described by Dakin, has an action more prolonged than hypochlorite, while Dichloramine-T, the third member of the group, when used in an oil solution, has an even more prolonged effect.

A very interesting comparison of the different antiseptics is given by Dakin and Dunham in their tables. As already pointed out, the method of standardizing germicidal activity against phenol in aqueous solution gives insufficient information to be of much practical value. When they are applied to the body we are not dealing with aqueous solutions only. There are other factors to be considered; for instance, the amount of wound secretion; the presence of pus in any considerable quantity; the concentration of the antiseptic; the method of administration, particularly as to whether the action is short or prolonged; the degree of contact between the germi-

cide and the germ; and the temperature of application.

"The only satisfactory way to follow the speed of disinfection," says Dakin, "is, to determine the progressive change in the number of bacteria in a suitable mixture after varying lengths of time." The mixture employed for the testing of the germicidal activity was one consisting of equal parts of horse-blood serum and a muscle-extract obtained by soaking fresh veal with an equal weight of saline and then straining through cloth but not filtering. To this mixture two drops of a staphylococcus aureus emulsion was added, and the bacteria counted to show the number of organisms in one drop, i. e., 1-40 mil. (Cc.). Various germicides were added to this mixture, and bacterial counts were made from time to time, varying from a few minutes up to twenty-four hours.

Some very interesting results were obtained by these experiments. For instance, it was shown that mercuric chloride acts very slowly. The mixture to which a 1:1000 solution of mercuric chloride was added was not sterilized for twenty-four hours. A similar mixture was not completely sterilized by silver nitrate in twenty-four hours, nor by phenol in twenty-four hours. In 0.5 percent of sodium hypochlorite, it was sterilized in five minutes; by 2 percent of Chlorazene in five minutes with Dichloramine-T, 2 percent sterilization was complete in half a minute.

An interesting comparison of chloramine-T (chlorazene) and hypochlorite is as follows: "A comparison of Experiments I and IX shows that a concentration of 0.25 percent of chloramine-T (chlorazene) in the mixture was as effective as 0.33 percent sodium hypochlorite, although the active chlorine in the latter was about five times as much as that in the chloramine-T. The reason for this difference is to be sought largely in the slower rate of reaction between chloramine-T and hemoglobin and other proteins, compared with the hypochlorite solutions."

The study of the antiseptic dyes was of particular interest. It was shown that in no case was sterility effected by the use of these substances, and after some hours the organisms grew unchecked. It was also noted that similar mixtures of blood-serum and muscle-extract, mixed with these dyes so that the final concentration was 0.1

percent, on exposure to air readily underwent putrefaction; showing that the germicidal action of the dyes is not marked.

From the preceding it will be seen that the chlorine-carrying antiseptics, and particularly chlorazene and dichloramine-T, are in almost every respect far superior to other antiseptics in general use. The chlorazene, being water-soluble, is indicated in all conditions where moist applications are indicated, and particularly where the wound can be kept constantly wet with the substance, or where applications can be made frequently. The dichloramine-T, being given up slowly from the oil which is used as a solvent, is particularly suitable "for cases requiring prolonged antiseptic treatment and for first-aid dressings in recent wounds which do not require irrigation." It is also useful for nasal antiseptics in the treatment of nasopharyngeal disease and for clearing up carriers. It has the great advantage over other chlorine antiseptics that it may be used in high concentration. It ordinarily need not be renewed more than once in twenty-four hours.

In using chlorazene, Dakin says that in practice it is advisable to keep a 2-percent solution in stock and to dilute this, if necessary, either with water, or, in case of considerable dilution, with normal saline solution, and, when an approximately isotonic medium is desired, normal saline solution should be used for preparing the desired dilution.

Ordinarily chlorazene is used in a 1-percent solution. As this is twice the strength in which hypochlorite can be used without causing irritation, it will be found to answer the purpose in almost any case of infection. In emergency, however, a 2-percent solution may be employed. On the other hand, even in very high dilution, chlorazene is an effective antiseptic. "In the eye, for example," says Dakin, "a solution of one part of chloramine-T in 1000 parts of normal saline solution will exert a satisfactory germicidal action, while 1:500 may prove rather irritating to the inflamed conjunctiva. Here, because of the constant irrigation by tears, there is chance for only a moderate accumulation of septic products likely to reduce the strength of the application."

"In chronic urethral infections, 1:500 can be used for the initial injections and the concentrations subsequently increased.

Similar considerations apply to the irrigation of the pleural cavity in empyema."

Chlorazene is also extensively used in a paste, made from sodium stearate and containing 1 percent of the chemical. This paste was introduced by Daufresne and has been extensively employed by Carrel and Hartmann. It has been placed on the market under the name of Chlorazene Surgical Cream.

We have touched only the high spots in the Dakin-Dunham Handbook on Antiseptics. It contains a rich fund of material, which should be in the hands of every physician.

ALFRED S. BURDICK.

Chicago, Ill.

AN APOLOGY TO DOCTOR LYDSTON

We are very sorry to say that in the article by Drs. Lydston and Latimer on "Tumors of the Urinary Bladder," which appeared in the November issue (page 802), the first picture was improperly placed, while legends were attached to both which, unfortunately, were incorrect. The legend of Fig. 1 reads, "After removal of the tumor," while, as the picture shows, the tumor is still in situ. The legend of Fig. 2 reads, "After successful operation for carcinoma," while the carcinoma is still plainly in sight in the picture.

The mistakes are very regrettable, and we wish to apologize to Doctor Lydston for their occurrence.

THE THURBER MEDICAL ASSOCIATION: A RESPONSE TO A TOAST

This is our Anniversary Day; and to me is given the chance to make our annual boast, that ours is the oldest—and the best—-independent local medical society in America. We have put forth this, our modest claim, for some twenty years and have yet to hear it disputed; it has been published to the world in *The Journal of the American Medical Association*, and no one has risen up to contradict it; no other claimant has ever come forward to question our right to this title. Therefore, we are justified in believing that we are IT.

No doubt, hundreds of other similar societies have been born; but, long before attaining to our age, they either have given up the ghost or else taken refuge under the

shadow of some larger central organization, and, so, become leaners, instead of boosters. We know of no other small country society, made up of country doctors, carried on by its members for their own benefit and that of the community in which they reside, which has succeeded in living for sixty-four eventful years, keeping up its interest and holding regular



Dr. Daniel Thurber.

meetings during all that time, and still looking forward in the confident expectation of doing yet better work in the future.

And now I purpose to tell you how it has come about that the Thurber Medical Association has been able to outlive the diseases of childhood, to withstand the maladies of middle life, and, after all this, to be standing forth, in a green and vigorous old age, the pioneer and patriarch of its kind.

In the first place, our good Society was founded because the physicians of this section felt the need of the stimulus of professional intercourse, but found that neither Boston, which was a long way off, nor Worcester, which was very inconvenient of access for this section, could satisfy that need. And, in truth, it is in part because of the remoteness of our location, far enough from the larger centers of population to avoid being swallowed up by them,

that it has been able to continue its separate existence up to this year of grace nineteen hundred seventeen.

In the second place, we have been fortunate in our name, which carries with it a broadness and an individuality that does not attach to the name of a place. Daniel Thurber was a noted man in this vicinity, and, though he had been dead seventeen years when our Society was born, we adopted him as our godfather; and we have kept his memory green during all these years, made his name a household word in our homes, and have adopted his handsome face as our emblem.

Also, we have been fortunate in our membership. Ours is a fairly homogeneous society, its members all being general practitioners, and all interested in the same lines of work. We have never had among us any brilliantly dazzling electric lights to dim the modest glow of our tallow dips. We never had any acknowledged leaders to look up to, but have all been simply good "average" men, nearly enough on an even level to be able to understand each other. Our numbers have always been so few that each one has had a chance to do his part, sharing both in work and in honors. If any man attends our meetings and shows an interest in what we are doing, we soon get acquainted with him; we size him up—and he sizes us up.

Milford is only a small town among small towns, does not furnish a majority of our membership, and, as may be seen by the day's program, does not annex most of the offices.

The highest rank in our membership is that of Wheel-Horse, and of these we fortunately always have been blessed with more than one. The "wheel-horse" is a man who not only is willing to work himself, but who knows how to get other folks at work. What success we have had has been largely due to our "wheel-horses." One of these has been our Secretary for the last fifteen years; and, if you will look at our record book, you will agree that he has been as good a secretary as any society needs to have. Today, in his extreme illness, our sympathy goes out to him, and we miss his genial presence and his unstinted enthusiasm. Not one of our members has been more interested in the preparations for this anniversary than had our secretary, Doctor Gallison. What work he has not

been able to do himself, his wife has done for him—and done it well, you will agree.

We have tried many ways to make our meetings interesting and profitable. The early way was, to appoint the members in alphabetical order, to read papers and discuss medical and surgical topics. The records show that this plan worked well sixty years ago; however, it won't work now any more. Instead, it takes all the ingenuity of our program committee (on which we put our best men) to study up some new plan every year. We have had such men as Trowbridge and Gage and Fallon, of Worcester, and Richardson and Garland and Cabot, of Boston, and Crothers, of Hartford, and Lewis, of New York, besides many others from various places, to bring up messages from the firing line. We have had symposiums on such burning topics as pneumonia and headaches and rheumatism; practical papers on all sorts of medical and surgical topics, from our own members and from good men from the outside. We have considered the merits of the various medical "isms" and methods of treatment, regular, homeopathic, eclectic, electric, alkaloidal, physical, and biological. We have catered to the educators by meetings on school inspection, have discussed nurses and nursing, for the benefit of the pupil nurses in our hospital. We have called in the public, to consider with us "how to live a hundred years." We have had an official organ at two different times, while many of the papers read here have been published far and wide over the country. And, also, we, at one time, were urged by a former president of the Massachusetts Medical Society to give up our charter and become a district society. This was distinctly a high honor, and was carefully considered; however, the idea was unanimously rejected.

I doubt whether any one feature has contributed more to the longevity of our Society than our annual meetings. For more than sixty years we have met together each year, on the Thursday on or before the full of the moon in October—a day for which we have an almost superstitious reverence—and always we guarantee a pleasant afternoon, provide a good dinner, furnish the best entertainment in our power, and enjoy ourselves generally, together with our wives and friends and invited guests, getting home in time for our evening office hours. I do not know how such a plan would work

in a metropolis; our folks, though, seem to enjoy it.

So, here you have it all in a nutshell. A society of country doctors, few in number, poor in pocket, and not making claim to more brains than their neighbors are endowed with. And yet—and yet—we have stood the strain of sixty-four eventful years, have done good work, have paid our bills in full, have today appropriated \$500 of our invested funds with which to buy a Liberty Bond, and are still in good health, with confident anticipations for the future. *Can you beat it?*

Here's to Doctor Thurber, of Mendon!
Long live the Thurber Medical Association!

J. M. FRENCH.

Milford, Mass.

ANOTHER COLLEGE MERGER

Bennet Medical College and the Chicago College of Medicine and Surgery are now combined, to form the medical department of Loyola University of Chicago. The purchase of the buildings and equipment of the Chicago College was made recently by Loyola University officials.

Dr. Lawrence Ryan is dean of the new faculty of the school; Dr. Alfred de Roulet is junior dean; Dr. G. E. Wyneken is secretary; Rev. H. S. Spalding, S. J., is regent.

The college is located on Lincoln Street, opposite Cook County Hospital, in the medical center of the West. The institution comprises five buildings.

Work will be carried on at the college on the highest plane possible, to meet requirements of all states.

Clinical work at the school is taken care of by men who are prominent in the medical profession. One year of college work is required from medical students before entering the school.

SODIUM CACODYLATE IN EXOPHTHALMIC GOITER

In view of the innumerable remedies suggested for the treatment of exophthalmic goiter, it is surprising that no one seems to have thought of that now familiar remedy, sodium cacodylate. So, it may be of some interest to learn that I have used it thus and found it far better than any other remedy I have tried; it being, at present, virtually the only one I use in the treatment of

this disease. Physicians who will try this remedy will, I am sure, like myself, not easily be willing to change to any other.

I inject the sodium cacodylate intramuscularly. At first I give a small dose—0.12 Gram, or approximately $1\frac{1}{2}$ grains—once every day, and continue them for twenty-five days. Then I discontinue the sodium cacodylate for several days, and in its place prescribe some iron preparation. Then I resume the cacodylate injections, however, in slightly increased dosage.

In severe cases, I prescribe, at the beginning of treatment, small doses of quinine hydrochloride four times a day, by mouth. In cases of moderate severity, sodium cacodylate alone is sufficient to effect a cure.

RAFFAELE MORETTI.

Los Banos, Calif.

[This is, indeed, an exceedingly interesting communication. Exophthalmic goiter is not easy to cure. The best single remedy we thus far have found is quinine hydrobromide, given in 4-grain doses four times a day, according to the method devised by Forchheimer. The combination of the quinine-treatment with sodium cacodylate, as adopted by Moretti, certainly warrants careful trial, especially in the more severe cases. Have other readers of CLINICAL MEDICINE had experience with this method of treatment? We want to hear from as many as possible.]

By the way, why can we not have a symposium on exophthalmic goiter? We hope that as many of our readers as possible will tell us how they manage this disease—whether they are getting results from medicinal treatment, whether their cases treated surgically are turning out favorably, and, in fact, telling us any “novelties” as to their method of procedure.

May we also point out once more the importance of intestinal cleanliness in this condition? Certainly, intestinal antiseptics are indicated in practically all cases.—Ed.]

GALACTENZYME TABLETS AFTER LAPAROTOMY

In May, 1916, I began using gaiactenzyne tablets, to relieve the excessive gas distention following an operation for cesarean section. Having had such good success with them in typhoid fever, I tried them here, and with equally good results

Since that time, I have used them as a part of the after-treatment in every laparotomy, such cases as general peritonitis resulting from ruptured abscess in appendicitis, acute salpingitis with leak into the peritoneal cavity, and similar conditions.

As soon as the patient recovers from the anesthesia and stops vomiting enough to begin taking hot water, I give two tablets, dissolved, every three hours for thirty-six to forty-eight hours, then about three or four times daily. Since adopting this treatment, I have not been obliged to prescribe anything for the relief of gas-pains and, in most cases, not an enema is given during the whole convalescence.

After the trial I have given these tablets, I feel sure that anyone can secure equally as good results.

CHAS. A. WRIGHT.

Delavan, Wis.

HOW TO CURE GOITER

With regard to the article, in the November number of *CLINICAL MEDICINE*, on how to cure goiter, I would respectfully refer all interested to Abrams' work on "Spondylotherapy." For some years, I have been following his suggestions with singularly satisfactory results. In 1911, when the Michigan State Medical Society was in session here and Dr. Mayo was highly praised as the proper man to remove goiter by surgical means, a lady of middle life appealed to me, saying that her physician—a very expert counsel—advised surgical removal of the gland, which was so large that she could not wear her ordinary clothing about the neck.

I was consulted, as she dreaded an operation and would not consent to it. By means of concussion of the seventh cervical spine, made with a tackhammer for plexor and a strip of linoleum as a pleximeter, these continued for ten minutes each day for ten months, I was able to reduce the goiter to such an extent that ever since then she has been able to wear her ordinary clothing with comfort. The goiter is not entirely gone. Neither do the surgeons admit that she has recovered.

C. S. COPE.

Detroit, Mich.

[While the makeshift employment of tackhammer and strip of linoleum (or,

rubber) in place of plexor and pleximeter has the sanction of Abrams' ("Spondylotherapy," 1910, p. 8), it may be assumed that every physician possesses the regular instruments for the purpose. Doctor Cope's experience is highly interesting; as is, indeed, the whole theory and practice of Abrams' new methods.—Ed.]

ENLARGED OR SWOLLEN NECKS FROM GOITERS

"I love women with large saucer-shaped necks" said a giant of a man to me not long ago.

"What do you mean?" I asked, with a smile.

"Well, you see," said this unusually intelligent and observant gentleman, "I have noticed ever since I read the first chapter and nineteenth part of Canto II of Pope's 'Rape of the Lock,' that there is more real feeling and passion, more womanliness and sweetness in girls and women who have a suspicion of a goiter."

What this man said is true. The emotions that accompany a slightly enlarged thyroid gland, a flat-shield-shaped goiter, are the warm, clinging, feminine characteristics that we love. It required, as usual, a nonmedical man to make this medical discovery. Doctors are generally too near-sighted to record such truths.

Here are the lines of the "Rape of the Lock," which in a farfetched way at only one part make reference to the neck and hair:

This nymph, to the destruction of manhood,
Nourished two locks, which gracefully hung
behind

In equal curls and well conspired to deck,
With shining ringlets, the smooth ivory
neck.

Love in these labyrinths his slaves detains,
And mighty hearts are held in slender chains.
With hairy springes we the birds betray,
Slight lines of hair surprise the finney prey,
Fairy tresses man's imperial race unsnare,
And beauty draws us with a single hair.

The thyroid gland, in most healthy persons, is not outwardly perceptible; swollen, enlarged, constantly irritated by sexual or glandular excitement—a characteristic of some races or families—it may expand enough to form a saucer-like plaque, visible and palpable on the throat, and then is called a slight goiter.

Thyroiditis is inflammation of the thyroid gland. If the ophthalmic region, the

eyes, exhibit certain characteristic signs, such as full, big or projecting eyeballs, the term exophthalmic accompanies the goiter. Exophthalmic goiter merely means that besides the swollen neck, or bulge forward, there are protruding eyes, rapid pulse, occasional palpitation of the heart, sighing and trembles of the muscles.

The substances elaborated by the thyroid gland can be found to produce those very activities. Fresh thyroid glands (or their extract) are given, when it seems indicated, to stupid, dullwitted, sluggish cretins or dry-skinned, thick-fleshed individuals.

Dr. A. Siebert is convinced that there is a great increase in the number of exophthalmic goiters. Men are in the minority, probably because there are nowadays so few eunuchs among them and such that are favored by a more or less stabilized vegetative nerve-system, in contrast to the girls working in factories and dry-goods houses, and in offices and schools, bending forward over their work. That is a cause for the many exophthalmic goiters seen, that is the primary condition we seldom get to see and seldom get the chance to take care of in time to prevent its progress.

In the treatment of an exophthalmos, the problem is a twofold one. Doctors are called upon to step in after the symptoms of palpitation, nervousness, muscular tremors, general or special muscular weakness, local weakness of the knees or of the voice, mental symptoms, depression, changeable disposition, flushes; affections of the ears, the eyes, the organs of smell; general or local pains in the finger-tips, toes, heels, and the course along big nerve-trunks; headache, vertigo, dyspepsia, diarrhea, insomnia, loss of hair, premature gray hair, pigmentation of the skin, itching, sweating, low blood pressure, loss of weight despite good appetite, all these, have their manifestations, singly or combined.

Looking over the symptoms enumerated, to which others might be added, we can not help to recognize as predominant one particular factor, namely, the lack of vitality, as expressed in pronounced emaciation.

Tonics and probably other medication, according to the condition, are required. The real cause of the exophthalmos, has to be reached by other means, however.

Every form of treatment, medical or surgical, in this disease is directed toward

the reduction in the size of the thyroid gland, and it seems to be reasonable to assume that by diminishing the activity of this transfer-station between cause and effect the results generally desired can be obtained. It is illogical and unscientific to treat an effect or even to concentrate all one's attention upon an organ that nature has created for its own relief or to remove this organ by operation, while neglecting the cause, which is, the vegetative nerve-supply of the glands on the other side of the effects that we get to see.

Every minute, the quantity of blood passing through the gland is equivalent to six times its weight, and it is five and one-half times as vascular as the kidney. The thyroid glands deserve attention at least five and one-half times more than do the kidneys; but, so far have failed to obtain a record attention. One does not know what to admire more, the enormous vascular capacity of the thyroid gland or the activity which makes such a vascularity possible.

LEONARD K. HIRSHBERG.

Baltimore, Md.

A SIMPLE SOOTHING APPLICATION FOR SKIN ERUPTIONS

The following is an effective, soothing and healing application in skin eruptions, especially psoriasis, acute dermatitis and intractable eczema. It is most effective when the eruption is scaly—it softens the hardened skin and gives comfort. It is prepared as follows:

To 1 quart of slippery-elm water add 3 drams of Goulard's Extract (liquor of lead Subacetate) and apply by keeping a compress thoroughly moist with the solution. The slippery-elm water is prepared by adding to 1 quart of boiling hot water one-half ounce of either ground or whole slippery-elm bark, and let it stand twelve hours; then strain and keep in sealed jars till ready for use.

It requires experience to know when to use lotions, salves or pastes. When properly selected, a lotion will do vastly more good than any ointment. Lotions apply only to certain classes of skin eruptions—the more acute and inflammatory the pathology, the more certainly should lotions be used. Salves are useful in conditions of opposite character; they are of little value on a surface that is constantly oozing.

Ointments are to be employed in the chronic conditions. Pastes are similar to salves and cerates, only, they are firmer and are intended to remain upon the surface as a protection, while being soothing.

H. F. BIGGAR.

Cleveland, O.

[This is a remarkable little article, because of the valuable information it contains, no less than on account of the brief, concise form in which this information is given. There is the remedy, there are the indications, and the differential uses of salves or pastes, respectively lotions. Not a word could be spared. This is the sort of articles that we want—practical, concise, meaty, and to the point. Let us have more of them, please.—Ed.]

AMENDMENT PROPOSED TO THE HARRISON ANTINARCOTIC LAW

This amendment to become effective from its passage by Congress and being signed by the President. It shall be the duty of each physician registered under this law to make a written report, on the first day of each month, to the collector of internal revenue of his district, showing the amount of narcotics, opium, morphine, cocaine, heroin and novocain that he has bought during the preceding month, giving the name of the firm or druggist, location, town, and so forth; also how much he has dispensed personally, giving name of patient, and so forth; also the amount on hand at this report; this not to include prescriptions written and filled by a druggist.

Also, the druggist, on the first day of each month, to make a written report of all narcotics bought, opium, morphine, cocaine, heroin, novocain, and so forth, giving the name of the firm furnishing said narcotics, and also showing in this report the number of prescriptions filled, names and their location of physicians writing them; also showing the amount of narcotics on hand at the close of the month.

It would take very little time for such a report to be made out, and, I believe, it would be of great benefit and protection to all concerned. Then a physician or druggist would not be subject to suspicion. Any physician or druggist making a false entry or trying to hide the amount bought or on hand, upon conviction, should be fined or

imprisoned, as the court might decide.

I certainly think this is a good proposition. I believe it will prove a great protection to physicians, and put the Government in more complete control of the dope traffic.

H. SAMPSON.

Gerber, Calif.

[We cannot enthuse very much over this suggestion which, to us, appears to pile on the onus of unproductive labor unduly. What does the family think about it?—Ed.]

HIGH COST OF LIVING

There are too many actors to bore us

And stars who are hardly a shine;

There are too many lording it o'er us

There are too many catered and waited,

Subsisting on lobsters and wine.

Who call for the fizzy-and-dry,

Too few who are sowing and hilling and hoeing,

So living—well, living is high.

There are too many thrummers and strummers

Annoying the keys and the strings;

There are too many drummers and loafers

Who are riding in automo-things.

There are too many schemers and dreamers

And only a few who produce,

Too many investing in golden-egg nesting

And few who are growing the goose.

There are too many preachers and teachers

Who work the south half of their faces;

There are too many tourists and jurists,

Whose suits are concealed in their cases.

There are too many lawyers and jawyers

Who demand, but who cannot supply,

And they serve a subpoena upon a Martini

And wonder that living is high.

Too many are looking for cooking,

Too few are encouraging spuds;

Too many find sinning is simpler than spinning

To dress in delectable duds.

There is too much of diction in fiction

And not enough actual toil;

There are too many diggers at fictitious figures

And not enough diggers of soil.

There are too many rimers and chimers

(Like me) doing versified stunts;

There are too many gapers (like you) of the papers

Who read and forget both at once.

There are too few who skin hard the vineyard,

Too many imbibing its juice.

And the while we inquire: "Why does living grow higher?"

The bulk of us fail to produce.

—Edmund Vance Cooke.

In the World War

THE MAKING OF AN ARMY MEDICAL OFFICER

On leaving the M. O. R. C. at Ft. Riley, Texas, with orders to report for duty to the commanding officer at Kelly Field, South San Antonio, we felt pretty much the same as a physician does with his first case after leaving medical college. The instructors to whom we used to turn for information and advice no longer are available. We are out in the world now, as medical officers, who have had a course of intensified training and are presumed to know enough to make good on any assignment.

We appreciated the fact that we did not as yet know everything about military affairs and still carried our books in our lockers to refer to, still looking for crumbs of information to add to our little hoard accumulated at training camp.

On reporting at headquarters with a copy of the orders, which were responsible for our being there, we entered our names in the book there, turned over our baggage checks to the assistant adjutant, and he had our belongings conveyed to our respective rooms.

Each medic was given a room 10x10x13 feet, in a new wooden barracks. The only furniture consisted of several nails driven in the wall, on which to hang our clothes. Each officer carries his own bedding roll—blankets, cot, chair and locker; and this furnishes his room.

We had electric light, and a wood-burning stove for the cooler evenings. The latrines were outside, also a small bathhouse with the usual showers. Uncle Sam is keen on his men having their showers.

These quarters were, of course, only intended for temporary occupancy, for, as soon as a medical officer was assigned to an aero squadron, it meant that he should be there only long enough for this squadron to be filled up and equipped, whereupon it would leave.

After getting acquainted with our room, we went to the camp infirmary and reported

to "The Surgeon" and made out our personal reports, to send one to the Surgeon-General and one to the Adjutant General at Washington.

Our work while here was not very arduous. We reported daily at 8 a. m. to the infirmary. "Sick call" is sounded daily at 7:30 a. m. in each company, and those of the enlisted men who feel sick come to the infirmary. Those of the men who had not as yet had their typhoid and paratyphoid inoculations and vaccinations completed were given them here. Records of each man's inoculations are kept in his service record and follow him with each change of station, so that there is little danger of his not getting them complete, especially if one is booked for overseas service. He is more likely, if the record happens to get lost, to get an additional "shot." The men line up outside the tent in long rows; inside, a medical department non-commissioned officer keeps the records, and, as each man steps in to receive his injection, the date is entered opposite his name. He then passes to where two or more medical officers are, each armed with a hypodermic syringe, and between them a table on which repose extra needles, antiseptics, and vaccines.

The men are handled very quickly. After receiving their dose, they pass out to the rear of the tent, their vaccination scar is examined by another medical officer, and if deemed insufficient, they are revaccinated. We inoculated between 500 and 600 men a day, and vaccinated about as many. Aside from a feeling of lassitude and a slight fever in some of the men, which develops eight or ten hours after the inoculations and lasts only over night, no disagreeable reaction resulted from these inoculations. In this camp we used a vaccine that contained both the typhoid and the paratyphoid bacilli, being known as the "triple typhoid." A course of three inoculations immunizes against both diseases. At our training camp we received three inoculations for each, six in all.

All new recruits entering the camp are inspected for contagion, including venereal,



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Rockefeller Institute War Demonstration Hospital where Dr. Alexis Carrel is instructing American Surgeons.

skin, and throat. The men render absolute obedience, so that it takes very little time to look over a hundred subjects. The make-up of the enlisted men, both from the physical and the mental standpoint, is very good, and the medical officer finds only an occasional case of measles, pneumonia, tonsillitis or gonorrhea among them. These patients are promptly sent to the base hospital, and measures are taken to prevent spreading. The medical officer gets practical training here in rapid vaccination and inoculation and in making out reports. This latter will hold him in good stead later, when he is still further alone—that is, when he is the only medical man in a detachment.

We eat at officers' mess, which costs \$1.25 a day. Considering the advancing cost of food, we feel this to be reasonable enough, for, they set a good table and we still are able to do it justice. Right here, I should like to mention that in the three months I have been in the service I have gained 14 pounds. Being slender to begin with, this gain was very welcome. The slender man begins to gain as soon as he enters the service. This gain shows even

in the training camps, owing, I suppose, to the regular hours of eating and sleeping and the relaxation from a great deal of worry of civil practice.

One of the pleasant points of the training camp was the association of so many medical men together from all points of the country. Evenings, we held impromptu medical councils, going over cases that we had had, getting one another's opinions, methods, and so forth, for minor and major surgery, internal medicine, different anesthetics, and other phases. But, with our lessons to study, the time for such discussions necessarily was limited; still, our duties here are very light; we have evenings entirely to ourselves, and it is really an education to sit in for an evening with six or eight doctors from different cities, different hospitals, ideas entirely different from one's own, and, ably aided by a fragrant havana or a veteran Jimmy pipe, freely discuss, ask questions, and praise or censure the methods presently used.

I do not think very many physicians expect to make money in the army; an even break is the best most of us can do on our



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Men of National Army Are Being Put in Fine Trim.

"princely" salary. Our practices will be "shot to pieces" when we return, and we shall have to begin to build all over again; nevertheless, I trust that this will be more than compensated for when we all return to civil life, if the M. O. but learns the value of this teamwork that is the vital part of the army, and carries it out. "The Medical Utopia" is not an impossibility, and I sincerely hope a great stride toward it will be taken by us, who are learning system, teamwork, discipline, subservience of individual prestige, for the good of the whole, where one man can be looked to for responsibility, where each is a unit depending upon, and in turn being depended upon by the rest of the vast machine. "The Medical Utopia," where each physician can do his best for his people and at the same time for himself, by getting his regular hours for rest, recreation, and further study, without the gaunt specter of want or necessity being ever before him! It is a beautiful dream and we shall not see it come true. And yet, why should it not be feasible—and why not investigate?

Ambulance duty is one of our duties here, though not very arduous. Shortly after breakfast, motor ambulances manned by one medical officer and two medical department men proceed to either end of the flying fields, ready to render first aid, should

any mishap happen to any of the flyers. Fortunately, and also thankfully, accidents are very rare.

Officer of the day, another duty where, paradoxically, the O. D. does most of the duty at night. That is to say, when any man is ill enough any time of the evening or night to require a diagnosis, it is the duty of the officer of the day to care for him. A medical department enlisted man calls for him at his quarters with a motorcycle and side car, and he is whisked away to the patient. Being called for a few times a night makes us feel as if we were at home again. This duty is only for twenty-four hours at a time, each medic having his turn.

I have put in four weeks here awaiting overseas orders. More time than I expected; but, the vacation was welcome, for, it gave us time to meet some of the physicians from Ft. Benjamin Harrison and Ft. Oglethorpe training camps and learn of their experiences.

ROBT. C. MURPHY,
1st Lieut., M. R. C.

San Antonio, Tex.

[We understand that Doctor Murphy expects to leave for active service with the aviation section to which he is attached. We wish him all that is good, and hope that he will write to us from over there; also,



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German Prisoners Taken in Battle of Menin Road, Marched through Ypres.

that in due time he will return safe and sound.—Ed.]

"FITTING THE UNFIT"

Under the title given above, Dr. Edwin F. Bowers contributes to *Everybody's* for December a very thoughtful paper upon the sifting out of the unfit by exemption boards from men called for military service by the Nation. The experience of a number of the medical examiners of these boards is cited, among them that of the editor of *CLINICAL MEDICINE*.

The outstanding fact cited by Doctor Bowers is, that "the total number of rejections for physical unfitness in these country-wide examinations will average about one in every four examined." This relatively large number of discharges for physical disability is the more striking, when it is kept in mind that "the bars were down" as compared with physical tests previously required to enter Army service. The requirements as to weight, vision,

hearing, and the like, were lowered from time to time during the draft. In the Army and Navy, before the war, these one-in-four percentages were practically reversed. In 1916, in the Navy, 70 percent were rejected; at Annapolis, about the same percentage; and in the Army about 68 percent were found unfit, in one month.

There was great variation in the results reported by different boards. We learn from Doctor Bowers' article that one Brooklyn exemption board early in the draft examined 600 men without being able to secure its quota of 191, and was forced to call 1200 additional men. The worst case reported was in Brooklyn, where of 104 men examined only one was retained. On the East Side of New York the rejections of one board were said to be about 40 percent. In this district there were 650 rejections out of a total of 1500 examinations. The physical condition of the men in this district was said to be peculiarly bad because of deficient nutrition, resulting largely from poverty, uncleanness, over-

crowding, poor ventilation, long hours of work, excessive use of tobacco and alcohol, and vice.

Among the physical defects which were very frequent among young men and to which Doctor Bowers calls particular attention, were diseases of the heart, hernia, flat foot, defective vision, poor teeth, tonsillar and other glandular enlargement. In a few districts, as the First Ward in Chicago, and in certain districts in Pittsburgh, there were many rejections due to occupational causes, for instance, maimed arms, burned limbs and missing fingers. One of the worst records was that of the Third Ward in Chicago, in which upward of 10 percent of the applicants were found to be suffering from active venereal infection, while hundreds more were afflicted with chronic forms of these diseases, and alcoholism was common.

Turning now to the future, we find special interest in the physical-examination requirements laid down for the draft in "Selective Service Regulations," just published by the Government and taking effect upon December 15, 1917. We find that in several respects the requirements have been lowered. Not only have the minimum weights been reduced, but the examining physician is permitted to accept a candidate who is below the minimum weight "provided the underweight is due to temporary causes and can, in the opinion of the medical examiner, be reasonably explained."

The standard for vision has also been reduced. The regulations in use during the first draft required a 20/40 vision for one eye and 20/100 for the other. The new regulations specify that "Men may be accepted whose vision is 20/100 or better in each eye, correctable by proper lenses to 20/40 or better in at least one eye, provided no organic disease exists in either eye."

As to hearing, the new regulations require that with both ears open the hearing should not be below 10/20.

Curvature of the spine is now cause for rejection only when it is sufficient to interfere with function or to constitute a marked deformity when the drafted man is in uniform.

We also learn that hypertrophied tonsils are not disqualifying, but, if the hypertrophy is sufficiently marked to interfere with respiration or phonation, the registrant

should be advised to have the large tonsils removed immediately, in the expectation of receipt of orders to report for duty.

The ruling on heart murmurs is of particular interest. Cause for disqualification is "definite organic valvular disease as indicated by secondary signs or symptoms in addition to murmurs." But it is also stated that "ordinarily no murmur should be declared organic unless secondary physical signs, such as cardiac enlargement, edema, cyanosis, etc., can be demonstrated".

Venereal diseases in themselves are no longer cause for rejection. "Syphilis is a cause for rejection only when permanently incapacitating. Syphilis in the primary and secondary stages, that is, during the infectious period, chancre, and gonorrhea (acute and chronic) are not disqualifying, but, individuals so affected should be advised immediately to secure appropriate medical treatment pending receipt of orders to report for duty."

As to the feet, large and painful bunions, hammertoes, if well marked and interfering with the wearing of a shoe, and overriding or marked displacement or deformity of any of the toes are cause for rejection; but, it is interesting to note the definition of the disqualifying flat-foot. "In the flat-foot which renders a man unfit for service, the arch is so far gone that the entire border rests upon the ground, with the inner ankle lowered and very prominent and the foot apparently pushed outward."

The drafted man theoretically "must have at least eight serviceable natural *masticating* teeth, either bicuspid or molars, four above and four below opposing, and six serviceable natural *incisors or canines*, three above and three below opposing," but, the following qualifying statements are made: "There must be one molar above and one below on one side which occlude; the remaining six opposing natural teeth may be either bicuspid or molars." Furthermore, teeth may be restored by crown or fixed bridge work, and these, when well placed and serviceable, are to be considered as natural teeth within the meaning of the above paragraph. Also, a well fitting plate or other denture is allowed to take the place of missing teeth, "providing the serviceable natural teeth on one side of the mouth are sufficient to meet one-

half the masticating (bicuspid or molar) requirements fixed above as the minimum."

While the number of candidates to be examined under the new regulations will be much smaller than before, the burden placed upon the examining physician is considerably greater. Any member of an



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Husky Scots Carry Wounded Boche Prisoner at Battle of Menin Road.

exemption board who has had an opportunity to study the new "Selective Service Regulations" will agree fully with the writer. We shall be glad to hear of their experiences.

ALFRED S. BURDICK.

Chicago, Ill.

UNIFORMS FOR EXEMPTION BOARDS

Dr. H. J. Smejkal, a member of one of the suburban (Chicago) exemption boards, has recently made the interesting suggestion that members of selective service boards should be directed to wear an appropriate uniform. This is more important than it may seem at first thought. In many localities, especially in the congested portions of our large cities, people respect the man in uniform. It gives him an air of authority, and in anything connected with the military establishment this is certainly desirable at the present time.

Doctor Smejkal has transmitted this suggestion to the Adjutant General of the State of Illinois, who has given the matter favorable consideration, and has promised to bring it to the attention of the military authorities in Washington, providing the idea finds endorsement in other boards.

Since many readers of *CLINICAL MEDICINE* are connected with exemption boards, we suggest that anyone who approves of this idea should take it up, either with the Adjutant General of the state in which he lives or with the Secretary of War.

The idea seems to us good. Exemption board members are officers of the Army, serving as faithfully as, and in many instances with greater personal sacrifice than, some of those who proudly wear Uncle Sam's livery of honor.

PERFORMING BLOOD TRANS- FUSION AT THE FRONT

In an interesting letter written by Captain Henry L. Sanford, of Cleveland, and published in *The Cleveland Medical Journal* for November last, he describes the following interesting incident:

"A little incident occurred the other night which appealed to me as most symbolic of our part in this war. After severe wounds located near big blood-vessels, we often get, eight or ten days afterward, what we call secondary hemorrhages, this resulting from the fact that the vessel-wall, not punctured at first, becomes eroded from the incident suppuration; and then, suddenly, there occurs a big hemorrhage.

Recently, at about midnight, I got a hurry-call for just such a case and before I got there the chap was just about gone.



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Ward in a British Hospital in France.

So, we sent a call to the enlisted men's barracks for a volunteer to give his blood, and out of several one young fellow was selected. We transfused about a pint of blood

into the English Tommy, and now, of course, he is going to get well.

A lot of English officers were standing around watching proceedings, many of whom had never seen a transfusion done before. When the thing was over, they all went up to our enlisted man and shook him by the hand and thanked him. Our chap had been put in bed beside the one to whom he had given his blood, and was very calm about the whole thing. When all was over, one of the English surgeons, with big tears in his eyes, turned to me and said, 'By God, that chap of yours acted like a Briton!' Of course, I asked him how else he had expected the boy to act; secretly, though, I felt very proud of him. That our men should be saving English lives by giving their blood, seemed to me a very beautiful and tangible demonstration of America helping out.

The sequel to the story is, as I have said, that this Tommy is getting well. Our boy stayed in bed for forty-eight hours, to make a little new blood, and then went back to his duties. A most beautiful friendship has sprung up between these two men, and they call each other 'Brother'—as well they may."

MERRY CHRISTMAS!

Many readers of *CLINICAL MEDICINE* have enjoyed reading the articles by Lieutenant Murphy of the Medical Reserve



"When We Get a Package From Home."

Four Signal Corps Officers in Aviation Camp, Kelley Field, near San Antonio, Texas. The Rest Are Medical Officers.

Corps of the United States Army, telling of his experience in camp at Fort Riley, Kansas. At the present writing, Lieutenant Murphy is attached to the aviation camp at South San Antonio, Texas. It is more than

likely than by the time this reaches you he will be on his way to France.

Lieutenant Murphy has from time to time sent us some very interesting snapshots showing army scenes. A number of these have already appeared in *CLINICAL MEDICINE*. The picture reproduced on this page shows the boys as they appear when they get a Christmas package from home. Doctor



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British Surgeon Aiding German Wounded.

Murphy is the man sitting in the middle of the picture, with his knife poised over the pie. Murphy makes this inquiry—"Do we look as if we were afraid of the boche?"

THE SHRINKAGE OF POPULATION IN FRANCE

"Before the war," we learn from a pamphlet issued by the American Red Cross, "the birth rate and death rate in France were so nearly equal that publicists voiced their concern over the future of the national life. Last year, however, with the death rate probably over 200 per 1000, not counting deaths of men in military service, the birth rate was officially estimated at only 8 per 1000. In New York State, the birth rate is 23 or 24 per 1000, the death rate about 14 per 1000.

"The total of deaths in France, in 1916, was about 1,100,000. Births numbered only 312,000. The net loss in population was 788,000, or nearly 2 percent of the whole. In Paris, where 48,917 babies were born in the year ending August 1, 1914, only 26,179 were born in the second year of the war, ending August 1, 1916.

"There is urgent need for effective work among children, Major Murphy cabled. He reported that there was also special need

for doctors and nurses for work with mothers and children. The Red Cross, accordingly, organized and sent to France an infant-welfare unit, which has been reinforced, in response to urgent requests from Major Murphy, by two additional groups of doctors and nurses.

"These specialists are surveying the situation and studying the work already being done by the French. They are practicing

among the people, without receiving compensation from patients.

"The task before the Red Cross is not only to cooperate with French specialists, but, also, to conduct a general educational campaign among French mothers, in the interest of better prenatal hygiene and scientific feeding and care of the babies. Special efforts will be made to protect children from tuberculosis infection."

THE WAR'S RECOMPENSE

(The original of this verse was found on an Australian soldier who bravely fought and as nobly died. His name is as yet unknown.)

YE THAT have faith to look with
fearless eyes

Beyond the tragedy of a world at
strife,

And know that out of death and night
shall rise

The dawn of ampler life:

Rejoice, whatever anguish rend the
heart,

That God has given you a priceless
dower,

To live in these great times and have
your part

In Freedom's crowning hour.

That ye may tell your sons who see the
light

High in the Heavens—their heritage
to take—

"I saw the powers of Darkness put to
flight,

I saw the Morning break."

—From The Red Cross Magazine.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

(Continued from December issue, page 941)

SO in the "Sonnets from the Portuguese" we see the touch of an artist, an artist thrilled to her very depths by the love of her "most gracious singer of high poems." Such an outburst as this, which reveals with magnificent frankness the innermost secrets of an ardently loving woman's heart, is, in my opinion, unequalled in literature. Has there ever been written, in sonnet form or otherwise, anything finer than this:

How do I love thee? Let me count the ways

I love thee to the depth and breadth and height

My soul can reach, when feeling out of sight
For the ends of Being and Ideal Grace.

I love thee to the level of every day's

Most quiet need, by sun and candlelight.

I love thee freely, as men strive for Right;

I love thee purely, as they turn from Praise.

I love thee with the passion put to use

In my old griefs, and with my childhood's faith.

I love thee with a love I seemed to lose

With my lost saints—I love thee with the breath,

Smiles, tears of all my life!—and, if God choose,

I shall but love thee better after death.

Here is an exquisite expression of the holiest passion that can sway a human soul. The world knows the Browning's wedded life; all was gloriously fulfilled—so far as mortality permits, without a shadow, those rare twin-spirits standing in clear light, whose radiance, intensified by the glow of genius, shed grace and beauty upon men and bade them reverence the majesty of Love. After their marriage, the Brownings resided principally in Florence, at Casa Guidi, a home immortalized by Mrs. Browning's poems of that name. Their eldest child died and has been admitted into the starry galaxy of fame in some beautiful verses written by the mother. I have not much faith in the depth of a sorrow that resolves itself into dactyls and spondees, rather agreeing with Dryden that "great griefs are dumb." It is, however, perhaps

unjust to apply the common standard to such an intellect as that of Elizabeth Barrett Browning. The poem is too long to quote, but, it expresses her grief in her own peculiar method and commemorates a domestic event that must have deeply wrung the hearts of the two great poets.

Like her husband's, her style was very early formed, and some verses of hers written in her tenth year were published in the *Athenæum* and attracted great attention by their merit.

Mrs. Browning never wrote as anyone else did. Save in the "Sonnets from the Portuguese," her style, like that of her husband, was unattractive to most readers. It is this peculiar originality, amounting almost to the unnatural, that made her reputation among the poets, critics, scholars, and literati and renders her so distasteful to the millions. To understand her, it is necessary to have a certain amount of learning; to enjoy her, a cultivated taste is indispensable. To be sure, like all true poets, she has frequently recurring touches of nature and simplicity that appeal to every heart, but, it is regarded as classic by many people, and treated accordingly. Indeed, Mrs. Browning's yearnings, as well as her instincts and studies, were of the past and future, and not of the present. Much of her poetry dealt with the dead and with the depths of thought, rather than with the human heart; although, when she chose, no one could reach that truest seat of poetry easier than could she.

In her "Vision of Poets," there is a Miltonic weight very remarkable for a woman. Her description of a Hebrew angel ministering at an altar surrounded by the great bards of the time is very fine.

Mrs. Browning's most elaborate work is her "Aurora Leigh." It may be called an epic of the heart, as made visible by society. In it figure the artist, the poet, the high churchman, the pantheist, the woman of convention, the woman of fashion the

seamstress, the mechanic, and the laborer; it also contains numerous descriptions of nature and scenery and embodies most beautiful imagery.

It is difficult for me to decide which of her poems please me most, outside of the sonnets. I quote two or three that especially appeal to me. Here is "The Prospect":

Methinks we do as fretful children do,
Leaning their faces on the window-pane,
To sigh the glass dim with their own
breath's stain

And shut the sky and landscape from their
view;

And thus, alas! since God, the maker, drew
A mystic separation 'twixt those twain—
The life beyond us and our souls in pain—
We miss the prospect we are called unto
By grief we are fools to use. Be still and
strong,

O man, my brother! hold thy sobbing breath
And keep thy soul's large window pure from
wrong;

That so, as life's appointment issueth,
Thy vision may be clear to watch along
The sunset consummation—lights of death

How true is this: "The Best Thing in
the World":

What's the best thing in the world?
June rose by May-dew impearled;
Sweet south wind, that means the rain;
Truth, not cruel to a friend;
Pleasure, not in haste to end;
Beauty, not self-decked and curled
Till its pride is overplain;
Light, that never makes you wink;
Memory, that gives no pain;
Love, when so you're loved again?
What's the best thing in the world?
Something out of it, I think.

Consider this:

Nothing is small!

No lily-muffled hum of summer bee
But finds some coupling with the spinning
stars;

No pebble at your foot but proves a sphere;

Earth's crammed with Heaven
And every common bush afire with God;
But, only he who sees take off his shoes.

It has been well said that all of Mrs. Browning's work is buoyed up by her luxurious and overflowing imagination. With all its imperfections of technic, its lapses of taste and faults of expression, it always remains poetry, throbbing with passion and emotion and rich in color and sound.

Peter Bayne says of her in his "Great Englishwomen": In melodiousness and splendor of poetic gift, Mrs. Browning stands first among women. She may not have the knowledge of life, the insight into character, the comprehensiveness of some;

but, we must agree that a poet's far more essential qualities are hers; usefulness, fervor, a noble aspiration, and, above all, a tender, far-reaching nature, loving and beloved, and touching the hearts of her readers with some virtue from its depths. She seemed, even in her life, something of a spirit; and her view of life's sorrow and shame, of its hearty and eternal hope is something like that which one might imagine a spirit's to be."

I rather have given a personal sketch of these two great intellectual lights than an elaborate exposition of their genius, which every reader has in his power to form for himself. Of their originality, power, and fearlessness, there can be no doubt, since they appeal to everyone capable of soaring above the hackneyed thoughts, conventionalities, and unconventionalities of what, by courtesy, is called modern poetry, particularly that known as *vers libre*.

* * * *

The great prominence which is occupied at the present day by the "sex-need" and the unaccustomed attention which is paid to it in open forum is not anything new, in itself, however new it may appear to us. It marked, at once, the climax and the beginning decadence of all the old civilizations. It is as though, with the climax reached, with the greater ease and comforts of life, with the increased necessities that in former days were considered luxuries, and with all the manifold changes toward a wider outlook on life, the relations of man to woman received a readjustment; as if the mutual attraction had become more emphasized, having been held in check in former strenuous times by the necessity of work, of struggle against the forces of nature, against savages, animal as well as human, against the needs of the body. For, the "sex-need" is only partly a physical one; the more highly developed man becomes, mentally and physically, the more his sex-need is sublimated, the more he searches for the ideal in woman, even though physical, tangible, yielding woman is still—yes, all the more—necessary to him.

And, yet, it is not certain that this open question, with all secrecy ruthlessly swept aside, now being discussed, with all that we are accustomed to consider as decent reticence thrown to the winds, is desirable, and whether it makes for the benefit of the growing youth. Miss Repplier, some time

ago, in *The Atlantic Monthly*, struck a true note when she pleaded for greater reticence and questioned the propriety (I do not mean the term in the meaning of Mrs. Grundy!) of the present unrestrained sex-discussions.

It appears strange that the means that are being employed for bringing sex so much into the foreground are mostly originated by women themselves, and by that portion of women who are considered as beyond the pale of respectability. If our thoughts and our speech are more closely occupied with sex, if women and girls are more exposed to sex-advances from men, who formerly used to admire their charms at a distance, because they could only imagine, not see them—it is because, at least in part because, women, as a body, submit to the dictates of the women of the underworld and the half-world in their attire; because they expose to the unrestrained gaze of everybody and anybody, without hesitation and compunction, charms which they formerly reserved for their husbands and their lovers exclusively; because they have “developed” in their intercourse with men and have thrown off the shackles of their former more retired position.

While it must be granted that the animal sexual act is as natural as any other animal act, I deny that it is as necessary as the act of nutrition. Physicians should never have made that assertion. Pathological physiology proves that to be so, for, while man cannot live without his digestive organs, while life is supported only for weeks—at most, months—after the stomach, for instance, has been extirpated, man and woman can live very well, and in health, without their generative organs. Amputation of the testicles, of the ovaries, does not remove vital organs and is not incompatible with a continuation of life for many years afterward.

It may be granted that sometimes continence in women is less injurious than in men. Yet, even in men it is as much a matter of training and education as it is in women. There are men who are continent until their marriage and who do not suffer from it. Of course, it all depends upon the mental and moral (again, “moral” not in Mrs. Grundy’s meaning) makeup, just as in the further assertion that “complete abstinence from love cannot be borne by women

through a long period of years without producing serious results on the body and the mind.” It is all a matter of proportion; it is all relative. Even men and women who are not exactly frigid can pass through long periods of chastity, or, better, abstinence, with perfect health, provided they have a sufficient mastery over themselves to make their sex-needs subservient to their other needs. He who yields to his passions is not necessarily the strongest man, if by doing so he offends the dictates of decency, modesty and moral cleanliness. (I wish to insist that I use all these terms, not from a narrow viewpoint, but in their true meaning.)

“Many wives are sexless; they are bored at their prospective duties of propagation.” *This is, in a great measure, the kernel of the problem.*

This is the most prominent problem, in the opinions of many, in all civilized nations today, for, the birth rate is constantly falling. It is also the solution of the problem of prostitution and of the lowered morality among the young people. The desire for no or few offspring has produced in our women an all too knowing facility for preventing conception. Women who might well bear children are too indolent, too lazy, too vain, too pleasure-loving to undergo the pains of wedlock; they desire only the pleasures; they refuse the duties, but insist upon all the privileges. And then they wonder that their husbands’ love grows cold and that they are left for other women who are, perhaps, less good looking, less physically attractive—who have the mental and the psychic qualities of appeasing, not so much the sex-hunger as the heart-hunger of the men.

Sex-need is a slogan that is being overdone. In the purely physical sense, it can be satisfied as easily as the full bladder is emptied of urine, and the merely physical satisfaction and sense of relief is no different. If a man is wanted by his wife only to relieve her sex-need to the extent of relieving the turgidity of the genitals, of giving vent to the passion, of lowering the pressure, as it were, his embraces will soon become less amorous and more merely perfunctory. With a lowered respect for his wife, there comes the diminished inhibition of yielding to attractions in other women. With the position which the wife takes who refuses to

bear children and to submit to the other duties of wedlock, while the husband must bear his full burden and, in consequence of his wives' vagaries, see his privileges and his pleasures curtailed by the precautions demanded by her, his attitude toward her necessarily undergoes a change, at first subtle, but gradually more and more insistent.

A man can not love and cannot respect his wife who desires only the privileges and refuses the duties of married life; soon he will compare her to the women who would supply him with these pleasures, and he will conclude that his wife is worse than they. For, they merely make their bodies the object of barter; they are, in most cases, just as decent, just as "nice," just as attractive, and often more so than so-called "good" women. Also, they are less censorious and less vindictive.

A woman who refuses to bear her share of the burden is worse than a mistress, because the latter gives up her good name to the man she loves; she gives herself, and is true to him as long as the mutual love lasts. The married mistress holds her victim in everlasting chains and makes his life a hell. She pretends to love him, and, yet, she refuses the seals and symbols of his love; she wants all of his love, all of his attention, and (and this is the main thing!) all of his money. But, she is not willing to reciprocate, she is not willing to give up.

Marriage is a matter of give and take, a question of privileges and duties. Truly, the husband gives, the wife does the taking; the husband has the duties, the wife the privileges. It's a lovely arrangement.

One of the writers on "Women and Morality" advocates open recognition of sexual partnerships outside of marriage in certain cases. This question is discussed in a novel ("The Healer," by Robert Herrick) that was reviewed in these pages a few years ago. This novel discusses the fate of the man, the wife, and the woman. The woman holds that the day will come when women will be permitted to bear the chil-

dren of the men they love, without losing caste, without giving up their respectability and their position in society; that the time will come when women, even though not married, will be allowed to have children, if they want them. I can understand that position. To many women the idea of having to live with a man all their lives is unbearable; they prefer to stifle their longing for children, they prefer a living death. I have known women, good women, who would have given their hope of salvation if only they could have had children. But, as for marriage—that is another matter. And I do not know that I blame such women much. Things usually have two sides. If man gets tired of the "partner of his joys," so does woman. And, why not? If married people only could learn that a vacation, a rest from each other would do them both good, life might be easier.

The problem of sex will not be solved by unrestrained discussion. Miss Repplier is right. Women lose by it; they lose a charm, a claim to respect, a something which characterized them and endeared them to man. Tacitus relates that the Germani of old looked upon woman as on something higher than man, and nowhere was woman held in such esteem as among our Germanic forebears. They were modest, yet, yielded to their husbands; they were retiring, yet, they aided them in danger; they were their husbands' partners in peace and in war; they shared their joys and pleasures, but, they also claimed their share in the dangers and troubles. *They were women!* Women of today who clamor for greater sex-expression, who would want all the pleasant things of life and, desire more knowledge in order to apply it for the prevention of the normal consequences of sex-need, are not women; they are not even females. They are—they cannot be designated.

I respect a woman more highly who wants to bear a child for the man she loves, even though she can not be married to him, than I do a married woman who refuses to do so.



Among the Books

BULKLEY: "CANCER"

Cancer: Its Cause and Treatment. By L. Duncan Bulkley, A.M., M.D. Volume II. New York: Paul B. Hoeber. 1917. Price \$1.50.

If the author is correct in looking at cancer as a general disease of which the local lesion (which ordinarily is removed surgically) is simply the result or product of a previous, perhaps long standing, blood- or nutritive disorder, it is readily understood why the simple excision of the tumor and the surrounding tissues cannot be expected to eradicate the malady permanently. For many years the accepted teaching with regard to cancer has been: Early operation. All the laboratory research that has been devoted to the elucidation of the cancer problem was utilized to the end of maintaining and supporting the insistence of surgeons upon early and "radical" removal, while the internists have accepted this decision of their surgical advisers. Yet, with all the laboratory work that has been done and despite the freedom with which surgery was permitted to remove cancerous growths, the mortality of cancer has increased by 28.7 percent in the fifteen years from 1910 to 1915. It is interesting to compare this evidence of failure on the part of laboratory research and surgical treatment in cancer with the favorable results as concerns tuberculous disease, the tuberculosis mortality having been lowered in the same period of time by 27.8 percent.

To the thinking man, these comparative figures speak loudly, the inference being, naturally, that the accepted treatment of cancer, and the position according to which cancer is purely a surgical disease, are woefully wrong. There are few men living today who have a larger clinical experience with cancer than has Doctor Bulkley, and the fact that he has for over thirty years persistently and insistently declared cancer to be a constitutional malady, associated with the failure of surgical treatment, should be sufficient to make us pause in our blind acceptance of the view that

limits the treatment of cancer to surgical measures.

In the present volume, which supplements an earlier book on the same subject by the author, cancer is studied carefully, while largely from the viewpoint of the clinician. Doctor Bulkley's results have shown the justice of his position, that cancer is a constitutional malady, and also the correctness of his claim that diet is of decided influence.

This book is essentially a book suitable for the practitioner. It will aid him to a better understanding of the causes and treatment of cancerous disease, and it may contribute toward diminishing the recklessness with which patients suspected of having cancer now are subjected to the knife, and then only too often to aggravation and generalizing of the malady, with rapid termination by death.

GLEY: "INTERNAL SECRETIONS"

The Internal Secretions: Their Physiology and Application to Pathology. By E. Gley, M. D. Translated from the French, and Edited, by Maurice Fishberg, M. D. New York: Paul B. Hoeber. 1917. Price \$2.00.

Here is a small and handy book that makes it possible to study the somewhat complicated problems connected with the subject of internal secretions, under the guidance of a scientist who has devoted much special attention to their elucidation. The study of the internal secretions, and the therapeutic indications deduced therefrom, are of comparatively recent origin. The available treatises are, frequently, too technical to attract the practitioner's attention, or, also, very often they fail by being unduly enthusiastic and optimistic in their practical application.

Doctor Gley has done a great service to physicians in relating dispassionately and critically what is actually known concerning these interesting organs and their vital products. While he warns against unjustified excessive optimism, he does not fall

into the other error of being ultraconservative; in short, he affords the possibility of one's formulating clear and sane conclusions concerning the actual merit of organo-therapeutic methods. Doctor Gley's book is distinctly and clearly valuable. Incidentally, it is of interest that the subject of internal secretions, of which he, a Frenchman, is an able exponent, was first brought to the attention of physicians by French physiologists.

THE PHYSICIAN'S VISITING-LIST

The Physician's Visiting List for 1918. Philadelphia: P. Blakiston's Son & Co. Price \$1.25 to \$2.50, according to style desired.

Blakiston's Physician's visiting-list is offered for the convenience of physicians for the sixty-seventh consecutive year. In addition to the actual visiting-list, there are the customary aids and guides: temperature chart, gestation chart; first aid reminders for poisoning, for drowning, dose list, and many others.

CARTER: "CLINICAL DIETETICS"

Nutrition and Clinical Dietetics. By Herbert S. Carter, M. A., M. D.; Paul E. Howe, M. A., Ph. D.; and Howard H. Mason, A. B., M. D. Philadelphia: Lea & Febiger. 1917. Price \$5.50.

In books dealing with dietetics, we are quite accustomed to finding the author's personal opinions and preferences laid down with an assumption of authority that recalls the title of the late Father Kneipp's book: "Thus Ye Shall Live (*So sollt ihr leben*). It seems as though the less is known of a subject, the more positively are opinions expressed.

It is a refreshing change to find in the preface of this book the acknowledgment of the authors that dietetics is far from being a mature science, and that a book founded entirely upon facts proved in the laboratory is as yet impossible. Nevertheless, it occurs to the Reviewer to doubt the desirability or even the ultimate possibility of an authoritative book founded entirely on facts proved in the laboratory; this for the reason that these facts would have to be proved largely for animals, while, where human beings are concerned, the tests could not very well be as inclusive as would

have to be the case to make possible definite and absolute conclusions. In this, as in all combinations concerning the human organism, we always are dealing with relative values; there is always at least one unknown factor—usually several of them.

However, in so far as "dietetics must be deduced in part from accurate knowledge of the chemistry of foods and of nutrition and in greater degree from a knowledge painfully acquired by previous experience in somewhat similar circumstances," it may safely be asserted that this treatise is sufficiently different from, as well as superior to, older works on the same subject to mark a notable improvement in the method of preparing a textbook on dietetics. The discussions of digestion, absorption, excretion, of energy requirements, protein requirements, and so on, are actually interesting, the authors having succeeded in presenting the somewhat dry subject-matter in a really attractive form. Part II deals with foods proper, while Part III is devoted to feeding in infancy and childhood. Finally, Part IV, comprising almost two-thirds of the entire volume, takes up the question of diet in the various diseases and conditions in which it is of importance. Altogether, the book by Doctor Carter and his associates was prepared with a great deal of patient care and painstaking, and it deserves heartiest commendation to the medical profession.

GRAVES: "MODERN DIETETICS"

Modern Dietetics: Feeding the Sick in Hospital and Home, with Studies on Feeding Well People. By Lulu Graves. St. Louis: The Modern Hospital Publishing Company. 1917. Price \$2.00.

Miss Graves' work on modern dietetics might justly claim recognition as a textbook on applied dietetics. It is an elaboration of a series of papers contributed to *The Modern Hospital*, with the intention to help the hospitals of this country solve some of the intricate problems of feeding the sick. Very justly, these papers attracted widespread interest and gave rise to the preparation of the present volume, which certainly contains an unusually valuable practical presentation of the subject.

In many instances, the author evidently speaks from bitter personal experiences when she insists upon the importance of

paying careful attention to the feeding of sick people. Also, she maintains, justly, that it is not sufficient to slam down before a patient a certain amount of foodstuffs that represent the needed caloric value; but, that these materials must be prepared in such a manner as to be pleasing to the palate and, indeed, to the patient's esthetic sense. At least that is true for many people, although, of course, others are quite satisfied with eating the same amount of stuff day in day out, year in year out.

Miss Graves' book gains by containing a large amount of practical suggestions and recipes that, so far as a "mere man" can judge, are easily followed. In short, it is to be hoped that this book will contribute toward developing recognition of the importance of dietetics, especially in hospitals, sanatoria, and similar institutions. Miss Graves quite properly points out that much has been sinned in this respect, and that thereby undoubtedly many patients have failed to receive as much benefit from their treatment as they otherwise might have experienced.

DRAPER: "ACUTE POLIOMYELITIS"

Acute Poliomyelitis. By George Draper, M. D. With 19 illustrations. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$1.50.

The little volume before us discusses what is known at the present time concerning the etiology, epidemiology, pathology, and symptomatology of acute anterior poliomyelitis, or infantile paralysis—both of which names, however, as the author properly points out, are incorrect, although so thoroughly established as to render their changing difficult.

It is proper to say that Doctor Draper is eminently qualified to write such a book, he having participated in the Rockefeller Hospital in the intensive studies of the disease during the great epidemic of 1916, while also having been a part author of the monograph on the subject issued by the Rockefeller Institute for Medical Research. The book may be accepted as a practical guide to the diagnosis, care, and specific treatment of epidemic poliomyelitis.

In the history outlined in the first chapter, attention is called to the fact that such definite knowledge as we may possess on infantile paralysis is of recent

origin. While isolated descriptions were published as early as 1774, 1835, 1840—the latest by von Heine—it was only in 1884 that Struempell suggested, as the first, the probable infectious nature of the malady. To Medin, however (1890), belongs the credit of placing the disease definitely in the class of those which occur as epidemics. The modern conception of the disease was developed with Wickman's detailed study of the epidemic in Sweden occurring in 1905. After that, much work was done, and it is a matter of history that exceedingly valuable contributions originated in the Rockefeller Institute.

Doctor Draper's description of the etiology, pathology, symptoms, and diagnosis of acute poliomyelitis should be studied carefully, the chapters on these topics containing an excellent résumé of what is known. With regard to the treatment, the method of immunization by means of immune-serum is fully described, while for the later treatment, that of managing the early hours of paralysis, and of muscle training, reference is made to the book by Dr. R. W. Lovett, on the after-care of poliomyelitis (reviewed in these pages in 1916, page 883).

It is of interest that in the treatment of the earliest stage of the disease the author questions, at least by implication, the advisability of employing powerful antiseptic applications to the upper respiratory passages, for, now that we have learned (p. 85) that the nasal secretions themselves are destructive of the virus, we should aim to conserve this natural agency. Whether the action of this secretion is best promoted by noninterference or by the gentle impetus to increased secretion afforded by bland saline and alkaline fluids, may still be regarded as an open question.

Doctor Draper's little book will be found of distinct service to the practitioner.

RUHRAEH AND MAYER: "POLIOMYELITIS"

Poliomyelitis in All Its Aspects. By John Ruhraeh, M. D., and Erwin E. Mayer, M. D. Illustrated with 118 engravings and 2 plates. Philadelphia: Lea & Febiger. 1917. Price \$3.25.

This treatise on poliomyelitis is somewhat more complete than the one noticed

immediately preceding, in that it considers the question of treatment more fully, while in the other chapters there also are discussed the epidemiology of paralysis, the symptoms, and so forth. Indeed, much valuable information has been collected in its pages that is of the greatest importance to the physician who desires to familiarize himself with infantile paralysis.

In the matter of treatment, the authors are very conservative. At the same time, they suggest various remedies that have been employed with satisfactory results in certain cases. Thus, for the pain of the early stage, they recommend codeine in combination with antipyrin. They also employ iron and arsenic as tonics, and some of the bitter drugs, with small amounts of alcohol, for the loss of appetite. Digitalis is held to be the best heart stimulant. However, the authors very justly are against indiscriminate drugging and do not believe that much can be accomplished by the use of medicine, except when prescribed with the greatest skill and judgment.

As to serum-treatment, the assertion is made that it is exceedingly difficult or even impossible at the present time to estimate the favorable results obtained by means of immune-serum. The entire subject calls for much further study, while, if the serum is used, its preparation should be undertaken only by one skilled in laboratory technic and be administered by one thoroughly familiar with lumbar puncture.

In their discussion of the orthopedic treatment of muscle training, the authors acknowledge their obligation to Miss W. G. Wright of Dr. R. W. Lovett's clinic, whose pamphlet on this subject was reviewed in this department (1917, April, p. 324). Altogether, Ruhraach and Mayer's treatise on poliomyelitis may be accepted as a standard textbook on the subject.

MEDICAL WAR MANUALS

Notes for Army Medical Officers. By Lt.-Col. T. H. Goodwin, R. A. M. C. With an Introductory Note by Surg.-Gen. William C. Gorgas, U. S. A. Illustrated. Philadelphia: Lea & Febiger. 1917. Price, \$1.00.

This is No. 2 of the medical war-manuals authorized by the Secretary of War and published under the supervision of the Surgeon General and the Council of National Defense. The text is based upon a series of lectures delivered at

the Army Medical School in Washington. It contains outlines of organization and administration, war surgery, sanitation in war, and general notes for service on the western front. The fact that the author possesses a long practical experience in actual war service, and, particularly during the present war, with its many new developments and requirements, makes this manual especially valuable for our medical officers. It goes without saying that all medical men who are interested in military medicine, either directly or indirectly, will wish to possess this as well as all the other volumes of the series.

"NOSTRUMS FOR KIDNEY DISEASES AND DIABETES"

This latest pamphlet issued by the Propaganda Department of *The Journal of the American Medical Association* (American Medical Association, 535 North Dearborn Street, Chicago. Price, 10 cents.) as a part of its work in disclosing facts regarding the nostrum-evil and quackery, is announced for the purpose of once more calling the attention of our readers to the splendid work being done in this direction by *The Journal*. The investigation of, and collecting data concerning, the various nostrums and quack remedies that are used for the purpose of abstracting hard-earned dollars from the pockets of usually poor people constitutes an activity on the part of the American Medical Association that certainly has ample justification in its own behalf. Ever since Samuel Hopkins Adams published his disclosures (in *Collier's*) concerning "the Great American Fraud," the American Medical Association has followed up this work with so much success that the nostrum-evil, without a doubt, has been considerably abated. Nevertheless, much remains to be done, and this work is deserving of the cordial and wholehearted support of every physician.

The pamphlets issued by The Propaganda Department should be ordered in quantities by practicing physicians and placed on the office-table or in the hands of the patrons, because the futility of attempting to treat serious organic diseases by means of so-called medicines, that are put up in such an irresponsible manner as are the nostrums and patent medicines, is there

so forcibly pointed out. It is this nostrum-evil that has in part been responsible for the reaction against drug-treatment in general, and has caused many people to lose all faith in such treatment as even a trained physician may prescribe; with the result that many people neglect to consult a doctor or to obey his directions at a time when their health might yet be restored by suitable therapeutic methods, whether by means of drug-treatment or a dietetic or general régime.

One may not always agree in everything with the dicta of *The Propaganda*; but, that does not alter the fact that its work is meritorious in a high degree, and that it is deserving of our wholehearted support.

MACKENZIE: "HEART AFFECTIONS"

Principles of Diagnosis and Treatment in Heart Affections. By Sir James Mackenzie, M. D., F. R. S. London: Henry Frowde, Oxford University Press, 1916. Price \$2.50.

We like this book of Sir James Mackenzie's, "*The Principles of Diagnosis and Treatment in Heart Affections.*" First, because it is a real book, and not a compilation—he has put in a quarter-century of scientific investigation and gathered clinical experience preparing himself for it. Next, we like it, because he takes the same view that we have so earnestly advocated; namely, that, after making full use of the opportunities afforded by laboratory and hospital, the most that can be said in their favor is, that they are useful as preparatory steps, but, that the real work must be done in the sick-room. And this must be done by the king of specialists (our own words), the general practitioner. Finally, we must express our appreciation of the thoroughness of the study and the masterly manner in which the work is conducted.

We might fill pages with illustrations exemplifying our reasons for this endorsement; instances of the insight afforded by the observations of a qualified clinician. Take these: "The investigation of the early stages of disease has not yet been seriously undertaken." "The patient's sensations must be studied while they are pres-

ent, and all associated phenomena carefully noted." "When heart failure sets in, the earliest manifestation is always a subjective sensation of a disagreeable kind." "Symptoms are produced in three different ways, according as they modify the structure of an organ or its functions, or call into play its protective mechanism."

It has not been so very long when we doctors dismissed a complaint with the slighting remark that it was "merely functional"; and this term was almost synonymous, in our minds, with "imaginary" or "hysterical." It is a striking evidence of the progress we are making that abnormalities of function are now being recognized as significant phenomena.

Passing reluctantly over many attractive chapters, let us quote some passages from the one treating of auricular fibrillation:

"The recognition of auricular fibrillation opens up a new era in the study of affections of the heart. . . . For the due appreciation of auricular fibrillation, the watching of individual cases for many years is necessary. . . . The onset of heart failure by 'back pressure' is shown by the recognition of auricular fibrillation to be misleading. . . . The recognition of how auricular fibrillation embarrasses the heart in its work will bring before you the essentials in prognosis and treatment. . . . The reasons for the beneficial effects of the digitalis-group of drugs can now be explained. . . . The discovery of auricular fibrillation was the outcome of a long and patient research. . . . Auricular fibrillation is usually persistent, and the heart may act for indefinite periods. . . . In the great majority of cases with heart failure and dropsy, the onset of heart failure is due to auricular fibrillation. . . . The patient is frequently conscious of the onset of auricular fibrillation, and the sensation is usually characteristic. . . . The rhythm of the heart in auricular fibrillation is of a disorderly kind. . . . When there are murmurs due to mitral or tricuspid stenosis, the presystolic murmurs due to auricular systole disappear with the onset of auricular fibrillation, while the diastolic remain. . . . The onset of auricular fibrillation is usually accompanied by signs of heart failure. . . . The prognosis in auricular fibrillation depends upon the condition of the heart-muscle and its power to maintain an

efficient circulation." And so we might go on quoting.

The application of digitalis, its exceeding value in appropriate cases and its non-action when not truly indicated, are laid down with a precision impossible before the recent studies of the heart had been made. The present writer could not detect the asserted differences between the action of digitalis and that of strophanthus, so far as heart action was concerned. Curiously enough, Mackenzie here classifies *cactus grandiflorus* with this group. Hypodermic injections of digitalin and of strophanthus he found without effect, for the reason that they were not absorbed.

The author treats of the nitrites and he mentions the bromides as being sedative, but, he seems to be totally ignorant of the existence of the powerful vasorelaxants aconitine, veratrine, and gelseminine. In this, he is not alone, to our regret. The day surely is past when a good word for such remedies would expose one to the suspicion of favoring irregular sects.

W. F. W.

MUNRO: "SUGGESTIVE THERAPEUTICS"

Handbook of Suggestive Therapeutics, Applied Hypnotism, and Psychic Science: A Manual of Practical Psychotherapy, Designed Especially for the Practitioner of Medicine, Surgery, and Dentistry. By Henry S. Munro, M. D. Fourth edition, revised and enlarged. Saint Louis: The C. V. Mosby Company, 1917. Price \$5.00.

The fact that a fourth edition of Munro's work was called for less than ten years after the publication of the first one was brought out, bears witness to the timeliness and need of a treatise of this kind for the general practitioner, and it likewise demonstrates the appreciation felt for the book itself. While the first version was somewhat tentative, each succeeding edition was subjected to careful revision, improvement, and greater completeness; yet, the author never lost sight of his first, and primary, aim, namely, to furnish a guide for psychotherapy that should be suitable for practical application on the everyday problems of the physician and surgeon.

This, the latest edition, contains a chapter on suggestion in dentistry, and also one on the human libido. The latter, the author

avows, has, in its preparation, enabled him to understand the great problems of humanity and to live closer to his fellows than he otherwise could have done, as well as to give the most efficient service. This desirable result bids fair to follow a close study of this chapter, as, indeed, will the study of the entire book. For, is it not a fact that we benefit, on our own part, from the advice and good that we are able to extend to our patients? In medical practice, as elsewhere, our actions not only are potentially of the widest possible centrifugal bearing, but, they also are retroactive, influencing our own selves, thus being, as it were, like chickens coming home to roost.

Regarding Freud's psychoanalysis, Doctor Munro is not altogether enthusiastic, for all that Freud's views in many points, coincide with his own. He discusses Freud's theories at some detail and comments upon them in a manner that will prove acceptable to the general practitioner. Here, as all through the book, the author's constant endeavor is manifest, namely, to help the practitioner to procure for himself, from the great mass of psychotherapeutic knowledge, the useful and practical, as applied in the treatment of all classes of patients coming under the domain of the general practice of medicine. Doctor Munro's book deserves great credit and increasing popularity.

BURNHAM: "FIRST AID"

A Textbook of First Aid and Emergency Treatment. By A. C. Burnham, M. D. Illustrated with 160 engravings and 2 plates. Philadelphia: Lea & Febiger, 1917. Price \$2.00.

While this little book is intended to train the volunteer assistant so that he may be able in an emergency to apply the principles of first aid, the requirements of the student have also been kept in mind in its preparation. The little book is serviceable for instructions of Red Cross workers and of those who may be called upon to give first aid to the injured in industrial establishments, also in railroad and other accidents. The treatment of the subjects is as simple as possible and the instruction given is excellent. This book can safely be recommended for the use of lay people, but, physicians also will find it of service for quick reference.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6348.—“Friedreich's Ataxia?” R. O. W., Tennessee, sends for examination a specimen of urine, together with the following case-history, and requests suggestions:

About four months ago, the mother of a well developed 3-year-old girl noticed that the child's knees would “seem to give way” and the child would fall; sometimes only one leg would “give way.” The doctor could find nothing wrong objectively, but, on watching a few minutes, a relaxation of some of the muscles of one or both legs could be observed. Usually the child would catch herself and not fall, although quite often she did fall. There is no history of any nervous or mental trouble or other disease. The mother is a healthy woman; the husband is a farmer. The Doctor continues:

“About three months ago, I put her on washed sulphur, gr. 1-32; strychnine arsenate, gr. 1-128; podophyllin, gr. 1-64; collinsonin, gr. 1-128; berberine hydrochloride, gr. 1-28, to keep the bowels open. I also gave her strychnine arsenate, gr. 1-128; iron arsenate, gr. 1-32; manganese phosphate, gr. 1-32; zinc phosphide, gr. 1-32, three times a day. She became nearly entirely free from the spells; however, having been without the tonic for some time, the child lately was taken with diarrhea (for about a week when brought to me again) and the ‘spells’ became as bad as ever. She passes one pint of urine daily. She does not lose consciousness, froth or bite; the muscles do not contract, but, rather, relax.”

The laboratory report discloses the presence of cystitis and marked disturbance of the body-chemistry. Traces of albumin and sugar are present, also indican and skatol. There is considerable pus, squa-

mous epithelium, some mucin, red blood-corpuses, very many colon-bacilli, and a moderate amount of calcium-oxalate crystals.

Had you not stated that the child occasionally falls and that there seems to occur a relaxation of the muscles of the legs, we should have considered this a simple case of autotoxemia and cystitis. The symptoms you describe, however, may be grave, foreshadowing the oncoming of Friedreich's ataxia. Still, the fact that the child became very much better upon receiving the sulphur laxative granules leads us to believe that thorough elimination, careful attention to the diet, and the administration of coli-bacterin possibly may prove curative. Nevertheless, a guarded prognosis should be given and the parents impressed with the necessity of having the child kept under observation for several months.

On general principles, we would suggest giving the child nuclein with the tonic formula, besides arbutin, 1-2 grain, and hexamethylenamine, 1 grain, to be given three times daily. Coli-bacterin should be administered every fourth or fifth day, and its dose gradually increased.

Investigate carefully how this child is being managed. Be sure that she receives no indigestible food, and only a minimum amount of candy or other sweets. Besides, it might be a good idea to massage the legs gently every third or fourth day; also, the application of a mild faradic current to the spine could do no harm and might prove beneficial.

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QUERY 6349.—“Nævus, Epithelioma, Seborrhæa capitis.” J. A. N., Mississippi, writes: “What do you advise for removing warts, nævi, etcetera; also, what to cure

rodent ulcer, epithelioma of face, dandruff, etcetera?"

Sodium ethylate will remove small warts and superficial cutaneous blemishes, but, some large *nævi* are liable to prove stubborn. There are three satisfactory methods of removal, namely: pressure, electrolysis, and puncturing with a needle or sharpened stick moistened with nitric acid. In many cases, but very slight impetus is needed to start the process of involution. Occasionally a single application of a weak solution of salicylic acid in collodion will cause desquamation and disappearance of the stain. Or, repeated thick paintings with plain collodion, continued for some days or even weeks, will prove effective in some cases.

If obstinate, the pressure-method may be combined with discrete puncturing. That is to say, with an ordinary or a three-edged needle, slightly break up the tissues within and then, with due aseptic precaution, immediately apply the collodion. Such local disturbance gives rise, when pressure is continuously exerted, to more or less plastic exudation and agglutination and gradual obliteration of the growth.

In basal-cell epithelioma, excellent results may follow radium-therapy or the use of the Roentgen-rays. In very many cases, surgical procedure will prove most satisfactory, while, in a limited number of cases, the application of caustics may be tried. Naturally, there is much difference of opinion between the dermatologist and the surgeon, but, much depends upon whether the lesion is superficial, deepseated or papillomatous.

Always the object to be kept in view is, the thorough destruction or removal of the epithelial tissue. Stelwagon states that relatively superficial circumscribed lesions probably do better under caustic treatment, while in the papillomatous varieties surgical measures should always be advised, particularly if the lesion is seated upon parts of loose and soft texture; and, if the neighboring glands are at all implicated, these should also be extirpated. Not infrequently, the area may be thoroughly curetted, and then a 50-percent solution of zinc chloride applied or else momentary cauterization with caustic potassa be done. Some dermatologists prefer the application of a pyrogallol salve several days. The present writer has often used, with excellent results, Marsden's paste, of which the fol-

lowing is the formula and the manner of using recommended by him:

Mix arsenous acid, 1 dram; powdered acacia, 1 dram; cocaine hydrochloride, 2 grains; then, with a small quantity of water, rub to a cream.

Curette the growth thoroughly and apply the paste on a piece of rubber plaster, after oozing has ceased. Leave in place for from eighteen to thirty-six hours. It may be necessary to make another application. Occasionally morphine (hypodermically) must be given to control excessive pain. Upon removing the plaster, you will find a black eschar surrounded by an inflamed area. Apply hot poultices until this slough comes away, then dress as any other clean wound.

It is unquestionably desirable in all cases to administer arsenic in some form, sodium cacodylate of late having been so employed, with excellent results.

For dandruff, we would suggest thorough cleansing of the scalp with carbenzol or some similar soap and hot water. In severe cases, it may be advisable first to massage the scalp thoroughly with warm water, to which has been added borax—2 teaspoonfuls to the quart. After the soap has been rubbed in, the head should be well rinsed and the scalp massaged with a small quantity of chlorazene cream. This is the most modern and, we believe, most effective treatment. The numerous older, accepted procedures may be found described in any standard work on diseases of the skin.

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QUERY 6350.—"Articular Ostitis." L. C., South Dakota, asks help in the case of a 16-year-old girl, the oldest of eight—all healthy and rugged, and the family-history good. She never had any injury. However, three or four times from the time she was a small girl up to the present attack she has had "spells of lameness" in her left hip, which would pass off in a few days, when apparently she would be all right again. Then, two years before seen by our correspondent, she gradually became so lame in the left hip that she was not able to walk at all, except with the aid of crutches.

When examined some months ago, a good deal of tenderness upon pressure existed over the left great trochanter; there also was pain in the hip-joint upon pressing the foot toward the body. The pain of which

she complained most, however, was located about three inches above the knee, upon the outer and anterior aspect of the thigh. She had been treated during the preceding two years by several different doctors, without any benefit.

"Under calcium iodide, 1 grain, three times a day, she showed marked improvement within a month. Her color improved and she felt better. Later, hot-air treatments were given, but, for two or three months these had to be omitted, as she could not get to the office. Except for that period, the treatment was continuous. She is now able to get around the house without crutches and without pain. There is, however, a hitch to the walk, and crutches are being used outside. There is slight pain or, rather, tenderness upon deep pressure over the trochanter; none upon pressure on the foot. Flexing the leg upon the thigh and attempting to flex the thigh upon the body gives pain in the knee. There seems to be some shortening of the left leg, and the left thigh is $\frac{3}{4}$ inch less in circumference."

Your patient presents the second stage of articular osteitis—hip-joint disease.

In the third stage, there is very marked deformity, which is the result of muscular contraction after absorption of the head of the femur and destruction of the ligaments. The position of the limb resembles that present in dislocation upon the dorsum of the ilium, namely, the thigh is strongly flexed, adducted, and rotated inward, and the foot inverted. There is, moreover, shortening of from 1 to 4 inches. Such displacement usually comes on gradually, but, sometimes is so sudden that it may be mistaken for a true dislocation. There is, of course, marked atrophy of all the muscles of the leg, and a difference in length, of several inches, may exist between the thigh of the affected leg and its fellow.

In the second stage, which has been called the stage of arthritis, the leg usually takes the position of permanent deformity, which is due to muscular action, not to destructive bone changes. At any time, an acute exacerbation may occur, indicated by increased pain, excessive tenderness, and inability to bear the slightest weight upon the limb. If articular abscesses form, the muscular spasm becomes so great that no motion whatever of the joint can be effected. The duration of this stage is very

indefinite, usually, though, lasting for a few months to a year or more.

Now and again, the disease is arrested in the second stage, and very occasionally it does not pass beyond the first. Here, unfortunately, the symptoms may be considered trivial, until they have continued for weeks or even months.

As a rule, there first is some lameness and stiffness of the joints. Not at all infrequently, this is observed only in the morning and wears off during the day. A little later, pain is complained of that is most frequently referred to the front of the knee or the inner aspect of the thigh, very rarely to the hip itself. The pain gradually increases in frequency and severity, and after a time begins to start during the night, produced by a sudden spasm of the muscles during sleep. Now the lameness becomes a constant symptom and week by week increases in severity. It must be borne in mind that all these symptoms may set in a very short time and, then, also, they come and go in the most inexplicable manner during a period of months or even two or three years before they are fully developed.

Your patient should be examined by a thoroughly experienced orthopedist. It must be remembered that, when the disease has advanced to the second stage, there always results impairment of the joint function, with decided lameness and muscular atrophy; although, provided the limb has been kept in the proper position, there will probably be very little shortening or deformity.

It is essential, of course, that rest be secured, by means of extension, by immobilizing the joint and by transferring the weight of the body, in walking, from the hip to the perineum. Such indications are now met, while the patient is up and about, by the use of appropriate apparatus.

When the disease has advanced to the third stage, especially after prolonged suppuration, excision is recommended. Indications for constitutional treatment are distinct. The patient should be given some such tonic preparation as the triple arsenates, preferably with nuclein. Codliver-oil also will prove beneficial.

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QUERY 6351.—"Acromegaly." R. C. K., New York, has under observation a pronounced case of acromegaly and asks for

suggestions regarding treatment of this condition.

At the present time, acromegaly is regarded as a disease characterized by the gradual enlargement of the acral¹ parts (nose, lips, tongue, lower jaw, hands, feet) and by hyperplastic alterations in the entire osseous system. In nearly every case the hypophysis becomes appreciably enlarged, this leading to broadening of the sella turcica. Associated with this there is a localization of corresponding symptoms of brain pressure. Not at all infrequently marked alterations of the thyroid gland and accentuation of the function of the interstitial glands are observed, together with loss of function (after an initial transitory increase) of the genital glands, and, some observers assert, hyperplasia of the suprarenal cortex. The pathological anatomical finding in the hypophysis is adenoma or adenocarcinoma of the anterior lobe.

Until lately, every method of treatment tried has proven ineffective; however, very striking results have followed the resection of the hypophysial tumor. Also retrogression of symptoms, especially those of cerebral pressure, with marked improvement in the visual disturbances, have been obtained by means of the x-ray.

Results can be expected from thyroid-gland feeding only in cases complicated with myxedema.

This entire subject is discussed at length in Falta and Meyers' "The Ductless Glandular Diseases," published by Blakiston, and we believe you will find it well worth your while to procure this volume.

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 QUERY 6352.—"Actinomycosis." A. C. R. Oregon, is treating a woman, forty-five years old, suffering from facial actinomycosis of ten years' standing. He wishes to know whether potassium iodide is the only useful remedy.

We regret to fully confess that we do not know of any remedy of real value for this infection, especially when the disease has lasted several years. As you are aware, potassium iodide proves efficacious in some cases, and, again, has failed utterly. Recently, the use of the x-ray has been recommended; also a few clinicians have reported good results from local injections of a 1 per cent solution of potassium iodide

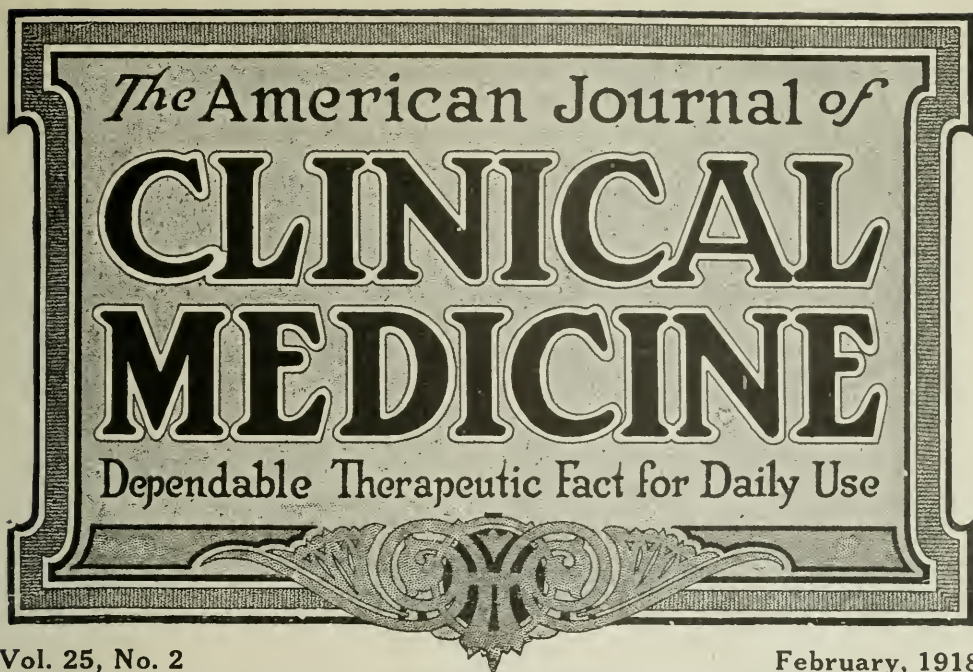
and sodium iodide. It is barely possible that the iodides administered internally, in connection with injections of sodium cacodylate, might prove useful. Where there is associated staphylococcus or colon-bacillus infection, the administration of an autogenous bacterin might be tried.

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 QUERY 6353.—"Typhoid and Paratyphoid Fevers." F. J. L., New Jersey, asks for all the recent literature we may have on typhoid and paratyphoid fevers. We regret that we are unable to supply the desired literature. If you have access to a file of CLINICAL MEDICINE, note particularly the article on page 759 of the September, 1916, issue; also the answer to the query on typho- and typhoid-prophylactic bacterins, on page 469, May, 1916.

Besides the typhoid-bacillus, there are other related organisms which cause their own special disorders. Among these, the paratyphoid bacillus stands prominent. It causes a febrile disease very closely resembling typhoid fever, both in its symptoms and its course; in fact, the differential diagnosis from typhoid fever can be settled only by an examination of the blood, which reveals the presence of the paratyphoid bacillus. This organism presents characteristic differences in culture-media from Eberth's bacillus, while clinically the fever which it occasions differs from typhoid fever in running a much shorter course, frequently from ten to fourteen days. The symptoms are much milder than those observed in uncomplicated typhoid fever, the incubation being brief and the attack abrupt; the latter usually beginning with malaise, dulness, apathy, severe headache, diarrhea at first, followed by mild constipation, and fever that rises rapidly to 104° F. The course is irregular, ending either by lysis or by crisis, with short convalescence. Relapses are rare, but, complications common.

The prognosis is better than that of true typhoid fever and very seldom has a recognized case proved fatal; however, the diagnosis is often somewhat difficult, because some cases are probably multiple, the Widal reaction showing the presence of typhoid infection, examination of the blood, feces, and urine, however, disclosing the presence of the paratyphoid bacillus, also. The treatment is that of typhoid fever proper.

¹Greek: *Akros*-topmost, extreme.



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Something Personal

Good morning, doctor. I just thought I would drop in for a little talk about CLINICAL MEDICINE.

I wish you would tell me, just between friends, how you like the journal. Does it help you to be a better doctor? Does it aid you to keep in touch with the profession, with progress in medical matters? Does it give you something besides strictly medical ideas? Does it make a personal appeal to you? In short, what I want to know is, is it human?

If only I could drop in on every one of you some morning after your office-hours and before you go out on your visits, and have just a little fifteen-minute chat, putting these same questions, getting your honest-to-goodness straight-outright opinion. Don't you think that a few visits of this sort would help us all? Surely, they would aid us up here in the editorial rooms. They would help you in your office and in your home. They would be good and serviceable to a degree that one can hardly imagine.

CLINICAL MEDICINE has always and steadfastly maintained a personal touch and con-

tact with its readers. It has always been our conviction that the Miscellaneous Department, which is conducted virtually by the "family," comes mighty near being the most important part of the journal. A time was when this department was a very lively one. Lots of correspondence and discussion going on and never-ceasing animated interchange of thought and of opinion; in short, it was like a few physicians visiting together, talking over their cases, each giving his ideas and saying why he approved of the other doctor's view, or why he differed. That sort of thing has been of inestimable advantage to lots of men in the field, especially those who are isolated and cannot often meet other physicians. Many write to us that they miss the letters from men on the firing-line and they wish we would bring them again.

Bless your heart, we want to. Unfortunately, that sort of thing can not be faked, we've simply got to have the letters, so that we may print them; and it is up to you, doctor, to give us bits of your experience, little observations concerning the action of drugs that you prescribed in un-

usual cases; places where you got in a tight hole, with a description of how you got out of it; in short, anything that will be of interest to the general practitioner or that will help to relieve his difficulties and his onerous duties.

We want you to write us, everyone of you, about the journal. We don't object to have you tell us honestly what you think of it, in fact, we want you to. Only, when you do criticize (and, honest constructive criticism is more than welcome), at the same time also supply the remedy so far as you can. What I mean is this: if you belong to those who would like to see more short practical articles from doctors in the field, such as we used to print so often, say so, by all means. But, at the same time, enclose such a little short, concise article yourself, and see if we won't print it. That's all.

War educates the senses, calls into action the will, perfects the physical constitution, brings men into such swift and close collision in critical moments that man measures man.

—Emerson.

THE OLD ORDER CHANGETH

In our Miscellaneous department this month we print an interesting and thought-provoking communication from Dr. F. N. Richardson, of Cleveland, Ohio, written in response to an article by Dr. H. Sampson, which appeared on page 82 of January CLINICAL MEDICINE. Dr. Richardson's remarks touch so profound an age-problem, and they represent the viewpoint of so many earnest, thoughtful men, that we feel they call for an equally sincere editorial consideration of the question which he raises.

The meat of Dr. Richardson's protest against the spirit of the times is, a resentment, the resentment of a capable and self-sufficient man against paternalism and restriction and supervision at the hands of the State and other constituted authorities. He feels, as he says, that this is an insult to individual intelligence. His protest, be it observed, is a man's protest. He does not make any peevish outcry against the curtailment of his "liberty" or the abridgment of his "individual rights." But, he feels that all this regulation and supervision of our activities is a sign of decadence, rather than of progress. "Are we degenerating and

becoming childish in our intelligence," he asks, "instead of progressing and becoming more adult?" He points out that his grandfather, and his father, and he himself, in his early years, "asked no odds of anybody, nor did anyone ask any odds of them." And this he says not in a boastful or capacious spirit, but as pointing the moral which he wishes to make. And this personal allusion does give to the question a cogency and a sincerity that nothing else could give it. We know, at once, just what the questioner means.

Doctor Richardson will forgive us, however, if we say that in our opinion he has missed the deeper and broader problem of which this is but a part; that he has, in fact, mistaken the part for the whole. All this regulation and paternalism to which he takes exception, which sets limitations upon individual excursion, is, as it seems to us, part and parcel of a general movement toward interdependence which is developing in every phase of our industrial and social life. And, this movement is not one of decadence but of progress; not toward infantile but toward adult function.

Biologically, this is the principle and method of upward development in organisms. It is the elementary, unspecialized cell that "asks no odds of any other, nor does any other ask odds of it." Every step in upward organization imposes limitations upon the individual cells, and upon the cell-groups, makes them more and more dependent upon other groups, and regulates their activities for the welfare of the whole. This is paternalism as applied to biologic organisms. In the highly organized body, every individual cell-group is very sharply limited as to the variation of its activity and responsibility, absolutely dependent upon the rest of the groups for all except its own special function, and utterly subservient to the demands of the whole organism.

In the social life of organisms themselves—in human life, for example,—the same thing holds good. It is in childhood and in primitive community conditions that one is independent, that he asks no odds of anyone nor lets anyone ask odds of him; that he is his own butcher and baker and candlestick-maker. As the community becomes more highly organized, there is di-

vision of labor, each man's work becomes more and more limited in character (at the same time, however, more plenary in content), and every man's activities are forcibly subjected and coordinated to the good of the community. Every child would *like* to be independent in the same sense that the units of a primitive community are: to live his own life, to be all things unto himself, to ask and receive no odds of anyone. And, indeed, it is good for him to be so—to a certain degree. But, we train him otherwise, because we know that, ultimately, he must adapt himself to the communistic life; that, when he reaches the age when he thinks it is time to be "independent" he will find that he cannot be so.

In the last few years this process in human life has been moving apace, and in vastly widening circles. There are even signs in the heavens that it is beginning to wipe out national border-lines, and merge nationalism into internationalism. Small wonder that those of us who were brought up under the old order become a little panic-stricken and begin to ask ourselves heart-searching questions. But, the blunt truth is, that the trouble is with us and not with the world. The change is inevitable; it is right and good, and, we must accept it. It is hard for us to kick against the pricks.

The old order changeth, yielding place to new,
And God fulfills Himself in many ways,
Lest one good custom should corrupt the world.

A steady hand in military affairs is more requisite than in peace, because an error committed in war may prove irremediable.

—Bacon.

"PROTECTING OUR SOLDIER BOYS"

We recommend to your thoughtful perusal the article entitled "Protecting Our Soldier Boys," contributed by Dr. Edwin F. Bowers to this number of *CLINICAL MEDICINE*. In the main, we agree with what the author says and our only possible criticism might be that he does not go far enough. The methods of prophylaxis which he advocates *already* are extensively in use in the United States Army—we believe in virtually all the cantonments. Apparently they have failed—thus far. The men *are* being provided with prophylactic packets and *are* being compelled to make

prompt reports of exposure to infection. While no doubt in some of the cantonments the rules are enforced with greater severity than in others—and they are not always as rigid as they should be—yet, the truth remains that, in spite of this carefully planned scheme of prophylaxis, the percentage of infection with venereal disease among our soldiers remains simply appalling.

Major Frederick F. Russell, of the United States Army, at the meeting of the College of Physicians at Philadelphia held October 3 last, made the statement that we have almost 400 cases per thousand of venereal disease in the Army, whereas our highest rate in the last twenty years in the Army had been 162. In *The Journal of the American Medical Association* for November 3, 1917, we find that the "admission rate" for venereal diseases in the National Guard was 118.8 per thousand, in the National Army, 146.4 per thousand, as compared with 77.8 per thousand for the regulars.

We have heard much about pneumonia, measles, and meningitis in the Army camps, but, these three diseases in October included only 12.2 percent, 11.5, and 0.6, respectively, as compared with the enormous number of cases of venereal disease just stated.

It may be that, when the methods of prophylaxis and more rigid supervision of venereally infected men have been fully developed, the percentage of infection will be reduced. Let us hope so. Certain it is that the Army authorities are doing their utmost. Already a zone-system about the cantonments has been established for the elimination of immoral surroundings, and Major Russell, in the address cited, lays down the following plans for fighting these diseases:

"We shall institute early treatment of venereal infection by all the so-called prophylactic methods, if possible within a few hours of exposure. We shall make frequent inspection of the troops, to discover concealed cases. We shall penalize a man who develops venereal disease, by taking away his pay and his liberty until he is cured. If he develops venereal disease and does not avail himself of the facilities of treatment, he will, in addition, be courtmartialed, and, if found guilty, he will be placed in confinement at hard labor. If, in spite of these requirements, he develops disease, he

will be sent to the hospital, put to bed, and be given a course of intensive treatment, until he is no longer a source of contagion to others and is well on the road to recovery."

Inasmuch as Russell has been placed in charge of the fight against venereal diseases in the Army, we may look for a rigid enforcement of these rules. However, mere physical control of the men is not sufficient. It is not enough to look upon the soldier as an animal, whose appetites will be gratified at any cost, and to lend even tacit approval to sex immorality. The present writer feels that moral forces must be brought to bear upon these young men. They have been removed from home and the restraining influences of the family and church, and this makes it exceedingly important that these young men shall be taught the necessity and desirability of living clean, healthy lives, and be helped to "keep straight" in every possible way. There is too much of a tendency to make light of "morality" in army- and in civil-life, to laugh at the boy who tries to resist the debasing influences that are all around him, and which are the more impelling because of the lack of the society of the good women, old and young, who do so much to keep all of us from going back to animal brutishness.

While every prophylactic measure of a medical character should receive consideration in the army, and should be adopted and insisted upon, a constant and increasingly stronger appeal should be made to the spiritual side of each man's nature. This is the task which the Y. M. C. A. has undertaken and which it is accomplishing so efficiently, without cant and without pretense. It is the beginning at the right end of the problem. The first principle in preventing infection is, to prevent exposure. This applies morally as well as physically. As a factor in keeping our army sound, making it a vigorous fighting-machine, the Y. M. C. A. will count for much. Every man—and every woman—should support this organization to the utmost.

OUR JANUARY NUMBER

We have received many, in fact, very many, letters from readers of *CLINICAL MEDICINE* congratulating us on the occasion inaugurated with the January issue, which

was the first one of our Volume Twenty-five. Also, a great many of our readers said a lot of nice things about the number itself. Thanks, everybody.

Here's a funny thing. A man (or a woman, for that matter) may turn out some particular piece of work, doing his level best, putting forth all his effort, giving the most that is in him; he may feel in the end that he has accomplished something, although, probably, the satisfaction may not be absolute, since we are told that there is nothing perfect here below. But, if he gets a few pats on the back and a few nice complimentary things said to him, he, naturally, feels good all over. That's the way we feel.

It is not as though we had a notion that *CLINICAL MEDICINE* is so all-fired perfect that no further improvement is possible. Rather, we feel stimulated by the praise that has been given us to continue persistent and enthusiastic effort, to put into every number, every issue, the best that we have and can secure.

So, thank you all for your nice letters and good wishes. Let us all pull together and work hard that *CLINICAL MEDICINE* may continue in the high estimation of its readers and that it may be what we want it to be, the best monthly medical journal published anywhere.

The blood of man should never be shed but to redeem the blood of man. It is well shed for our family, for our friends, for our God, for our country, for our kind. The rest is vanity; the rest is crime.
—Burke.

GERMANY'S GREAT SECRET

When you come right down to the rock bottom of things, this war is a religious crusade. The issue is, in the last resort, a religious issue. We say that it is a war to determine whether government of the people, by the people, and for the people, shall perish from the earth; but, in reality it is to determine a much broader and more basic question of which that is only a part; namely, whether the spiritual or the material shall rule the earth. It is a death struggle between idealism and real-politik.

We have given full recognition, and even a certain meed of admiration, to Germany's forty odd years of material preparation for war. We have recognized in some degree her mental and political and social prepara-

tion during the same period. But, we do not sufficiently comprehend, I think, the systematic, deliberate moral, or, more properly speaking, unmoral propaganda which has constituted the real preparedness of the German nation for this war and which constitutes the real menace to the world's civilization. To give them their due, it is no fault of the German leaders themselves if we have failed to understand their teaching; for, with characteristic cynicism they have over and over again proclaimed that war was but an incidental phase of their national philosophy of life.

Stripped of its wordy camouflage, the German philosophy of life, which for the last thirty or forty years has insidiously and sedulously been instilled into the German mind (not the German soul, for, such teaching negates a soul), amounts simply to this: That all sentiment and religion is silly, soft, babyish, fit only for children and for childish peoples, a hindrance to growth and achievement, a species of foolishness which nations and individuals alike must throw off if they wish to prevail in the struggle for place; that such things as honor, and unselfishness, and respect for the rights of others make a nation weak and put her at a disadvantage against the nation that is strong enough to repudiate such claims; and, finally, that a nation that has the iron nerve to cast off all these fantastic obligations will, by that very repudiation, acquire such a tremendous vantage-power against the peoples who remain hampered by them as to become virtually invincible.

This, at the heart of it, was Germany's great secret; or, rather, the great secret of Germany's autocratic rulers, by which they expected to subdue the world. They perceived that the possession of a soul stood in the way of the full exercise of brute strength; and they deliberately set about to kill the German soul. The process was a long and tedious one, for, souls die hard. Indeed, it is not at all so sure that they succeeded in stamping it out with the thoroughness and completeness that they think they achieved. There probably still remain, even in Germany, many thousand knees that have not bowed to Baal and many lips that have not kissed him, which will have to be reckoned with. But, at all

events, it was accomplished sufficiently for the purpose of the leaders.

The process went on under the very eyes of the rest of the world, but, we did not perceive it, partly because it was carried on so subtly, partly because we could not and would not credit it. Moreover, it was confined to the German nation, and in those days we did not seriously concern ourselves with the internal affairs of other peoples. The German leaders knew better than to spread that particular propaganda to other nations, for, it was part of their plan that other nations should retain their idealism, which, according to the Teuton philosophy, constituted their weakness and made them an easy prey to German ruthlessness.

However, there was, as I think, a further factor which, more than any other, drugged us into insensibility as to what was going on. We were ourselves (I refer particularly to the English-speaking nations) lapsing into moral and spiritual indifference. Lapped in luxury and nursed in prosperity, we were drifting toward materialism,—not the aggressive and deliberate materialism that the German leaders were teaching, but, the negative, lazy materialism of sloth and complacency. And be sure that the shrewd Teuton plotters calculated on that factor, likewise. Well they knew that no state of mind and spirit is so enervating and decadent as that which admits ideals and does not exert itself to live up to them—that to which ideals have become a dead letter through non-observance.

Fortunately the shock awoke us; at first, I think it must be acknowledged, through our self-interest. Perhaps, in our dulled condition, that was the only channel through which the shock could reach us. But, however that may be, gradually our souls became fully awake, and saw the true issue in all its yawning cleavage. I do not mean that, even yet, we see all the far-reaching ramifications of the issue; they are revealing themselves every day, every hour, almost. But at least we saw where the real issue lay; and we took our stand beside our spiritual ideals. Like the virgin knights of old, we watched our arms before a spiritual shrine.

It is for these spiritual ideals that we are now fighting; we have highly resolved that honor and virtue and the brotherhood

of man shall not perish from the earth. Thank God, the soul of the nation is awake at last.

If ever there was a religious crusade, this is one. If ever a people marched to battle under the banner of the cross, we and our allies are those peoples. Every man, woman, and child who is doing his part to help the war is fighting under that banner, fighting for the existence and supremacy of all that makes life good and decent, not to say noble and lofty.

Brother, are *you* among the crusaders? Is *your* soul awake? Are you fighting the good fight? It matters not what religious views or opinions you hold or whether you hold any at all. That is not what I mean when I say that this is a religious war. You believe in righteousness, and fairness, and virtue, and honor, and the brotherhood of men, and the rights of the weak, and truthfulness, and justice, do you not? These are the fruits of the spirit, against which the German frightfulness has deliberately and openly set itself. For the love of God, for the sake of your own manliness, take one outright stand or the other; either agree with the Teuton that these are silly, childish, weak, outworn sentiments that have no place in modern life, or else buckle on your armor and go forth this very day to defend them with your life,—which means to sacrifice your time, your comfort, your plans, your prospects; and, if you are so circumstanced, your blood; day in, day out, unceasingly, untiringly, uncomplainingly, until the danger is removed and their safety is assured.

We must never throw away a bushel of truth because it happens to contain a few grains of chaff.
—Dean Stanley.

EVERY DOCTOR IN THE MEDICAL RESERVE CORPS

What an ideal situation it would be, if every doctor in the United States who is mentally, physically, and morally fit were in the Medical Reserve Corps.

The time is coming, and in the immediate future, when the Medical Reserve Corps of the army must be immensely augmented, and in order to enable the Surgeon-General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medi-

cal officers, let us take the above thought seriously.

We all know, from past history, the conserving value of an efficient medical corps; and, this means numbers as well as training.

A statement made by one high in authority in the Surgeon-General's office, "that our fighting forces would be decimated by sickness and casualties in six months, were it not for an efficient army medical corps," clearly emphasizes the importance of every doctor in the United States, who meets the requirements referred to, accepting a commission in the Medical Reserve Corps of the United States Army.

The struggle in which we are now engaged, and for which we are preparing to take such a prominent part, depends for its success as much upon the medical profession as it does upon our combatant forces; and, while we do not know that any such intention as herein suggested is in the mind of the Surgeon-General, it would at least give him the necessary corps of medical officers upon which to draw and thus serve the best interests of our country and the best interests of the medical officer serving.

ON THE BUSINESS RELATIONS BETWEEN PHYSICIANS AND DRUGGISTS

In its December number, *The Retail Druggist* discusses the relations of the doctor, as a customer, to the druggist, expressing the opinion that it is up to the druggist to see to it that he supplies the doctor with virtually every dollar's worth of goods bought by the latter in the nature of pharmaceuticals and other supplies. It is asserted that the druggist is equipped to serve the doctor better than can any physician's-supply house, since he is in possession of valuable pharmaceutical knowledge that every wise doctor would be only too glad to take advantage of. Moreover, the druggist is close at hand and is in a position to carry everything that may be demanded by the physicians in his locality.

Naturally, in the business dealings between physician and druggist, price is one of the main considerations, and the druggist is advised in that editorial to find out how close he can come to meet the prices paid by his local physicians elsewhere,

while at the same time enjoying a reasonable margin of profit. The editorial goes on to say that there are many instances when the druggist sells goods to physicians at a loss. It also raises the question as to just where the line should be drawn in making special prices to a physician. "Shall he be given rebates on pharmaceuticals and surgical supplies and not on safety-razors or on cold-cream? Shall the courtesy extended to him be continued outside of the strictly medical line?"

As to these questions, we think it wrong for a physician to expect any druggist to sell him goods at a loss, and we agree fully with the editor of *The Retail Druggist* when he says that the physician should be willing to pay a profit to the druggist on lines not connected with the practice of medicine. However, when he asks, "Do you know of a doctor who makes a lower rate to pharmacists for medical service?" we unhesitatingly answer "Yes," emphatically so. The present writer has never charged his druggist friends anything whatever for medical services, nor does he expect or accept reciprocity to the extent of being furnished supplies free of charge. On the contrary, he invariably refuses such mistaken courtesies, insisting upon paying cost price, with a reasonable percentage added so as to protect the druggist from loss—for, selling at mere cost, means an appreciable loss.

In our opinion, or, rather, in the personal opinion of this writer, physicians should exercise great care not to place themselves under obligation to the druggist by accepting pharmaceuticals and other supplies free of charge. We have known doctors to enter a drugstore, go behind the counter, and help themselves to cigars, candy, and any medicine desired. This is most emphatically wrong and is certain to produce ill will sooner or later.

We agree with *The Retail Druggist* that physicians should buy their supplies, as much as possible, from their local druggists and we admit that the physician is justified in expecting and accepting a reasonable rebate, providing he is in a position to reciprocate in the courtesy, by directing his patients to procure medicines and other supplies in the same place. As for supplies, in lines other than those pertaining to the physician's work, it is our opinion that the physician has no right to expect to obtain

these at cost, but, that he should be willing to pay the druggist a reasonable profit on them, even though he may accept the courtesy of a slight reduction in price.

The business relations between physician and druggist should be guided by the principle of fairness to both parties. They should be distinctly a game of give and take, not one where one party does all the giving and the other all the taking. Rather, any courtesies extended should be reciprocal. In the expressive term of the vernacular, it should be strictly a matter of fifty-fifty.

In this manner, the relations between physician and druggist, which necessarily must be close, at least in cities and towns, can be made pleasant—and mutual fairness in dealings is the only condition under which pleasant relations are at all possible, and under which conditions are tolerable.

An unproductive truth is none. But there are products which cannot be weighed even in patent scales, nor brought to market.

—John Sterling.

SOLVING THE ARMY-RATION PROBLEM

The vexing problem of supplying our soldiers and sailors with the vegetables so necessary to preserve them in a condition of health has now been solved. It merely requires that we leave the water at home and let the army-cooks add it to the ration when they wish to serve the vegetables. And the process is a simple one. Potatoes, turnips, cabbage, onions, in fact, every conceivable kind of vegetable, all go through a process of cleansing and whatever "skinning" may be required. After this, they are shaved, sliced or otherwise subdivided. Then their water content is driven off in moderately heated ovens.

The 78 per cent of water carried by the mild-eyed potato, the 87 per cent in beets, 88 per cent in carrots, 83 per cent in parsnips, 91 per cent in radishes, 89 per cent in turnips, and so on through the entire list of available vegetables, is simply left at home.

What the soldier will finally get will be, all the cellulose, cell-salts, vitamins, and nutritious matter contained in the vegetables—with the water added in the field or in his own camp-kettle, be he in France or Italy or wherever fate takes him. This "fodder" retains all the delicate flavor of

fresh vegetables, and is succulent, tender, and tasty.

George T. Renke of New York, and other experts on food-problems compute that the adoption of this form of ration for the army and navy will save the country, on transportation alone, \$19,000,000 yearly during the war. Hundreds of motor-lorries and thousands of men now engaged in handling canned water—with only 20 per cent or less actual food held in combination—could be released for more important service.

As the desiccated material weighs, on an average, only one-fifth as much as the canned or whole vegetables, it can readily be computed that a ship loaded with scientifically prepared food could carry as much actual food material as can five ships loaded in the old unscientific way.

It only remains for the government to give official sanction to the adoption of a food-plan that will have such a vital bearing upon the transportation-problem and that at the same time provides our boys with a more complete and more diversified health-ration.

It is to be hoped, in the interest of our country's great needs, that the necessary sanction will not be long withheld.

Let us labor for that larger and larger comprehension of truth, that more and more thorough repudiation of error, which shall make the history of mankind a series of ascending developments.

—Horace Mann.

QUACKS AND FOREIGNERS

Dr. Henry R. Krasnow last year presented to the Chicago Medical Society a paper of unusual importance and it is a great pity that it had to wait ten months before seeing the light of publicity. In this paper, Dr. Krasnow calls attention to the fact that our foreign-born citizens were being exploited by the advertising medical quacks. It is said that the creed of this unscrupulous gentry is brief and to the point—"Scare the patient out of his senses, find out how much money he has, then get it."

Our foreign-born citizens come to us from paternal governments, and the fact that a man is permitted to advertise in the public press as a doctor gives him and his statements an official status in their eyes. They are, therefore, easy victims. This class of advertisers, fortunately, has been,

largely, driven out of our own newspapers, but, they still find a lucrative field among the readers of the periodicals published in foreign languages and it is exceedingly difficult to deal effectively with this evil. Just now, one of the Chicago papers is raiding the advertising quacks, with the promise of excellent results. Unfortunately, the raid is an occasional measure, while the activity of the quacks knows no intermission.

The wisdom of permitting newspapers and other periodicals to be published in any but the English language has been questioned. However, they are the only means which these people have of acquainting themselves with the trend of affairs. They might, indeed, be made a valuable means of educating the foreign-born citizens in English, were all such publications required to print their entire contents in parallel columns, one being English. Unfortunately, almost insurmountable financial considerations stand in the way of such a plan—unless by government subsidy.

It is not possible to forbid medical advertising by law. Some of these advertisements are so astutely worded as to be unobjectionable in a legal sense. While objection may be made to any one claiming to "cure" cancer, tuberculosis, "Bright's disease" and diabetes, we can not object if his sole claim is that he is *treating* these diseases.

It might be well if medical societies were to carry in each of these papers a standing advertisement from the Chicago Medical Society to the effect that American physicians of good standing do not advertise in the public press and that persons who do thus advertise are not received as members of the professional bodies or recognized as belonging to the profession. If anyone has a better suggestion to make in the way of meeting this difficulty, we shall be glad to hear of it.

I fancy the proper means of increasing the love we bear our native country is to reside some time in a foreign one.

—Shenstone.

DR. A. T. STILL, THE FOUNDER OF OSTEOPATHY

Dr. A. T. Still, of Kirksville, Mo., died on December 12, 1917, at the advanced age of eighty-nine years. It is only a little more than twenty-five years ago—to be

exact, in May, 1892—that the American School of Osteopathy was founded, although the ideas and teachings which Doctor Still propounded in this first college of Osteopathy had been consciously developed since the year 1874. Whatever may be one's opinion concerning Osteopathy, it must be acknowledged that this school of healing has made remarkable progress and has gained much recognition in this last quarter-century. Part of this undoubtedly is attributable to the enthusiasm and forceful character of Doctor Still himself, who claimed the right to think for himself and to strike out into new lines of thought—something at that time rather a dangerous thing to dare.

Owing to our present views of biological reactions and immunological processes, we are prepared to accept, with only slight reservation, the primary postulate of Still, to the effect that “the body contains within itself all the chemicals, all the medicines necessary for the cure of disease”—an assertion that at first, before the day of immunological research, was so startling as to seem absurd. However, even while granting this concession, we hardly find it possible to accept the corollary postulate of the “osteopathic lesion” without reservation, irrespective of the fact that the importance of the vertebral column, and the nerves which it contains and for which it provides channels of exit, has since been emphasized by another writer.

It is not our purpose here to discuss the merits or demerits of Osteopathy. What we want to do is, to pay tribute to the memory of the late Dr. A. T. Still, as an unusual man, who accomplished much by the force of his character and of his convictions, and who helped or was instrumental in bringing about a wider outlook and a greater breadth of view in medicine. We need men who have the courage of their convictions, even if we do not agree with them in everything.

If Oliver Wendell Holmes was right in defining a crank as “a man who does his own thinking,” then Still was a crank, with a big C. But, what of that? So was Holmes, himself; and so his contemporary, Semmelweis; so was Galileo; and so were hosts of others who contributed each in his own way to the progress of mankind, even though they may have sensed and proclaimed only a part of the truth; and even

though this fragment of truth was alloyed with error.

VOMITING OF PREGNANCY—WE LIVE AND LEARN

A discovery has just been announced that for the moment throws Armageddon into the shadows. It comes, not from the battlefields, not from the workshop where amid the clash of resounding hammers the brain of the mechanician evolves those modern giants of steel that dwarf Briareus and his Titanic race; not from the laboratory where the microscopist with unerring eye follows the enemies of human-kind to their lair; no, this latest marvel is announced from the rostrum of a distinguished professor of obstetrics in one of our medical schools—one most assuredly ranking as A plus. This astounding discovery is embodied in the following pregnant sentences to be found in a recent medical journal: “Vomiting of pregnancy is always the result of gestation; it only occurs in the pregnant woman.”

Since the world was startled by the momentous announcement that the Dutch had taken Holland, no more surprising and unexpected news has been thrown before a stunned public. Revolutionary to the last degree, it forces us to reconstruct the very framework of our beliefs to harmonize them with this great truth.

In this matter of the reproduction and perpetuation of the species, our sympathies hitherto have been altogether with the prospective father. He has seemed to us to merit the commiseration and the unstinted support of united masculinity. He has been, for the nonce, reduced to the last stage of abjectness. Organized womanhood casts upon him glances that convey to his inmost soul the sense of his bottomless depravity. The consciousness of guilt, ghastly consequence of his unbridled appetite and its selfish gratification weighs him to the ground. He grovels. He labors by day and cogitates by night to find the means of in some slight degree making up for his dereliction. He no longer walks the street with head erect, in the pride of free manhood, nay, he slinks. Even in his place of business and among his associates, he wears a cowed visage, that speaks tellingly of the terrible inward sense of guilt. When he enters his whilom

home, he faces, unprotected by gas-mask or other defense, an implacably hostile female battery. He is shrapneled with ailments and complaints, shelled with wants, bombed by necessities, stunned by interminable lists for expenditures, for matters as mysterious to him as the Maya sculptures. Edgings, insertings, nainsook, dimity, lacings, all the etceteras of the layette, and many other unknown terrors assail his bewildered senses, and, finally, his demoralization is completed by a gassing with diaper!

Meanwhile, miladi is enthroned in splendor; surrounded by a court of devoted admirers, her every wish gratified, her needs anticipated. Every female in reach joins the levee and devotes herself to the fair queen's service with a heartfelt enthusiasm no mere man, be he Pope or Kaiser, ever elicited. She may think she wishes emu's tongues for dinner, and straightway all war and business messaging is thrust aside and the wires are kept hot to the antipodes that her longing may be gratified. She complains multitudinously, but, that is part of the game and is heard with satisfaction by her entourage—she is just getting even.

That is the basic idea—getting even! With all her boughsomeness, her sweet and lissome adaptativeness, there is a deepseated conviction in the female mind that in the scheme of creation she is unfairly treated. She sees the man unpitifully accomplish his selfish purpose and blithely go his way, leaving her to bear the agonizing consequences—and it isn't fair.

And this it is that underlies the suffrage-movement, the demand for an extension of woman's sphere, the unrest and fiery outbreaks on the part of our dear helpmate, the other half of our race. She laments that she has not the inconsequent freedom of man, and in her helpless rage she grinds us whenever she has the chance—and the greatest of these chances is her pregnancy.

One small solace seems to be extended to us, the persecuted male sex, by the aforementioned recent discovery—that woman has to do all the puking. For, even as Gargantua demonstrated the divine omnipotence by being born from his mother's ear, so she matutinally ejects "Missourians"* from between her teeth. Without the slightest desire to shirk any more than this crushed scribe does, anyhow, or to jubilate over our

sisters' misery, he can not help feeling a bit easier if this great boon be vouchsafed us. But, it is well to wait until one is sure before ordering up the materials for celebrating—and this looks as if it might be one of those things too good to be true. Is it? We search through the musty records of the past, and at last we come across that which we dread to find—way back in the days when Achard was a medic student—circa 1801—no less an authority than a Harvard professor of obstetrics placed on record the case of a woman whose first positive sign of her pregnancy was the morning vomiting that always assailed her husband at that period.

Alas, and again, alas! Is there no balm in matrimony?

It's a tough world for us men!

Men will always act according to their passions. Therefore the best government is that which inspires the nobler passions and destroys the meaner.
—Jacobi.

DEATH OF DOCTOR CROTHERS

News has just been received of the death of Dr. T. D. Crothers, superintendent of Walnut Lodge Hospital, at Hartford, Conn. In the minds of physicians, Doctor Crothers' name is intimately connected with the movement of the last few decades to give scientific support to the crusade against alcoholism. Doctor Crothers stood foremost among medical men in this struggle, not only as a physician dealing with individual cases of alcohol addiction but also as a voluminous writer and enthusiastic speaker in behalf of his life work.

CLINICAL MEDICINE has frequently published contributions from his pen, the last one being in the January issue. His death means a loss. Fortunately, here, as always, the work is greater than the man. Soldiers may drop out of the ranks but others take their place and the work goes on. Doctor Crothers' memory will live, however, for the great good that he has done and for the truths that he defended and promoted.

"WEATHER PERMITTING"

It is greatly to be feared that the delivery of this number will be delayed by weather conditions; as was the case with the January issue. While we regret this, we feel certain that our readers will understand, and condone the unavoidable delay.

*In days of yore when the Illinoisian was a "Sucker," and the Indianian a "Hoosier," the native of Missouri was denominated a "Puke."

Leading Articles

The Progress in Medicine

By FREDERICK TICE, M. D., Chicago, Illinois

TO review the progress in any science, even over the brief period of a quarter of a century, is no easy task. At the present time, in every branch of science, including medicine and its allied subjects, such rapid progress is being made that the impossibilities of yesterday are the demonstrated and acknowledged facts of today. It is beyond the limits of logical reasoning, really in the realm of imagination, to predict what the near future may develop. Much of the present-day progress is simply the culminating achievement of perhaps generations of gradually developing evolution. The inventor or discoverer of some new method or principle merely is most fortunate in his nativity, to be born at just the opportune time. The great men belong, not to the time in which they live, but, to all time; they merely mark by some special achievement the constant and eternal progress. In this sense, paradoxical as it may seem, it is a far easier task to review the progress in medicine during rather the past twenty-five centuries than the past twenty-five years. In so doing, the consideration is limited to following the broad underlying principles, rather than the isolated individual accomplishments.

For the present purpose, it is possible to trace a well-defined curve of progress beginning in the far-distant past, sometimes indistinct or broken, but, becoming more and more distinct, down to the present. Owing to certain definite features, it is fairly easy to divide this curve into periods or epochs.

The earliest period, which may be designated as that of the religiousuperstitious, includes the very origin of medicine, from its beginning up to the time of Hippocrates. This period is characterized by mystical mythology and the dominating religious in-

fluence in the production and cure of disease. Health and disease were simply the reward or punishment for right or wrong, dependent upon the pleasure or anger of some one of the numerous deities. Mystery, fear, religion, and disease were all intimately associated. Much evidence of this period may be found even today, relics of long ago. How unconsciously, in placing the Greek symbol $\mathcal{R}$ at the beginning of a prescription, the physician of today invokes the good will and assistance of the god of health!

Until very recently, at least, the belief prevailed among some of the American Indians that disease was brought on by evil spirits. The medicine-man of the tribe, decorated in outlandish costume, effected a cure by dancing and making hideous noises.

Pilgrimages to certain springs or shrines, where miraculous cures are asserted to be wrought and special offerings made, are another manifestation of this same superstitious belief.

The presentday Christian Science is only a relic of a period long antedating even the dark ages, a system devoid of any science and frequently less of Christianity.

Hippocrates First to Liberate Medicine

The beginning of the first real progress in medicine may be traced to the time of Hippocrates, the Father of Medicine, born and educated in the temple of Aesculapius, on the Isle of Cos, where he practiced his art until the death of his parents. After visiting other temples and shrines, he located in Thessaly, and, by his establishing himself outside of a temple, an attempt was made to separate medicine from religion and the many deceitful methods then in vogue. According to his conception, health and disease were the consequence of the

proper or the improper admixture of the four "elements"—blood, mucus, yellow bile, and black bile. Gradually the superstitious theory of disease was displaced by a purely theoretical one, the so-called humoral, without any anatomical basis, one, however, that sufficed to dominate the profession for practically two thousand years.

Following the time of Hippocrates, the center of medical learning was transferred from Greece to Alexandria and eventually to Italy. The Goddess of Science was attracted for a time to the sunny shores of the Bay of Salerno, and tarried sufficiently long to establish the first real medical college. Finding conditions unfavorable for progress, the exacting goddess soon took her flight to the more congenial cities of Padua, Bologna, and Pisa, in northern Italy. Time, conditions, and circumstances all combined to make the fifteenth century the most remarkable in educational history. During this time, the period of the renaissance, Italy could boast of more universities than were found in Germany, Hungary, Bohemia, Bavaria, England, and France combined. Very substantial progress was made in all the various branches of science, particularly in medicine.

It was during this time—on August the 1st, 1542—that Andreas Vesalius published his "*Fabrica*," this anatomy being based upon actual dissections of the human body. This marks the beginning of human anatomy, to which substantial additions have been made since then. Quite naturally, with the development of anatomy, the functions of the various organs received attention, and, so, as a result, William Harvey, the Englishman, announced and demonstrated his great discovery of the double systemic and pulmonary circulation. With the gradual determination of a normal standard, there soon followed, as might be expected, marked variations or abnormal findings, thus initiating the study of pathological anatomy.

The Rise of Pathology, Physiology, and Bacteriology

Vesalius, during his dissections, collected many data, which he intended to publish in the form of a clinical pathology. This he never did. However, years later, the task was accomplished by Morgagni, the father of modern pathology. From the mythical, superstitious idea of disease, there finally

resulted the more tangible and evident one of gross anatomical changes.

Having accomplished so much in anatomy, physiology, and pathology, it might reasonably be expected that Italy would continue indefinitely to maintain the leadership. This, however, was not to be, for, further progress was made in other lands.

Theodor Schwann's cellular theory of the structure and growth of plants and animals prepared the way for Virchow and his cellular pathology, which reduced organ-pathology as a cause of disease to a cell-unit.

Simultaneously, Pasteur, the father of modern bacteriology, was busy evolving and establishing the cause of fermentation, and this soon resulted in his brilliant discovery and announcement of the bacterial or microbic cause of disease. Incidentally he also established the closely allied branch of vaccine therapy—and thus laid the foundation for the subsequent investigations of Koch, von Behring, and others in the now important field of immunology.

During this period, the great Claude Bernard was advancing the knowledge of physiology, by establishing and developing the method of investigation by means of animal-experimentation; a method, which has assisted very materially in the progress of medicine, and is, today, indispensable.

Perfection of Clinical Methods

With the gradual development and acceptance of a normal standard of anatomy and physiology and the knowledge of disease-conditions, obtained chiefly by means of dissections, clinical methods were introduced by which to detect these changes during life.

At first, this was attempted, in the main, by interrogations and later by definite methods of physical examination. In 1761, Auenbrugger published his discovery of "Percussion of the Chest," but, which received little attention, in fact, was virtually forgotten, until Corvisart, in 1808, translated it into French. Ten years later, in 1818, the immortal Laennec announced his discovery of auscultation and the invention of the stethoscope. To him, is also due the credit of introducing the careful recording of the clinical history, physical findings, and the subsequent course of the disease as observed from day to day.

The invention of the microscope marks the beginning of the clinical laboratory,

which has assumed a most important part in presentday diagnosis and treatment. During the recent few years, numerous and varied laboratory- and clinical-methods have been developed—so numerous, indeed, that a simple enumeration is, practically, impossible. Clinical instruments of precision, graphic methods, and means of accurate diagnosis have become indispensable. Nevertheless, many of the laboratory- and clinical-methods, while of assistance in diagnosis, are of far greater service in determining and estimating functional disturbances.

Bacteriology has conclusively demonstrated the intimate relationship of microbic infection to disease and has succeeded in definitely determining the essential causative organism in not a few of the diseases.

Without attempting or wishing to underestimate the importance of infection, bacteriology has placed too much emphasis up-

on the mere presence or isolation of some microorganism as the basis of diagnosis and disease. The accompanying or final changes in the body-tissues, the results of bacterial infection, were not sufficiently considered. It is on this basis, not only in the infective, but, in the noninfective diseases, that so many of the presentday methods are founded.

The rapidly increasing number of clinical functional tests, to say nothing of the great number of laboratory methods, particularly in immunology, is only an indication of the importance of the clinical aspect of pathological physiology and the present tendency in clinical medicine. From the present indications, it may be said that much of the present progress in medicine is being made in the field of functional medicine, and it even is safe to predict that the near future will bring still greater achievements.

Bronchopneumonia in Children, with Special Reference to Treatment

By W. W. McCHESNEY, M. D., Abingdon, Virginia

EDITORIAL COMMENT.—Although the medicinal treatment outlined by the author for bronchopneumonia in children does not correspond with that advocated by us, since we are in favor of alkaloidal and other definite drugs wherever they can be used to replace the galenicals, we take pleasure in printing this very excellent paper, believing that it contains many valuable suggestions.

THE subject of bronchopneumonia is of interest to every physician who has to practice among children; however, because of its importance, the entire subject can not be discussed in a paper such as this; moreover it has been so much discussed and written about that but little remains to be said that is original. For these reasons, only an attempt will be made to present a brief review of the diagnosis and treatment, and especially some practical suggestions on the treatment that can be carried out in almost any home and possibly may be of interest to general practitioners and of value to some.

Every physician in general practice meets with cases of bronchopneumonia, especially during the winter and springs months, and as a complication of many of the other

acute diseases. Most of the primary cases occur in children under four years of age, at a time when the lungs are more susceptible to disease and more frequently attacked than any other organ in the body. It is a frequent complication of many of the acute diseases, and may then occur at any age. This disease is one of the most serious to which the child is subject and the mortality is very high. There are several reasons for this. Because of the tender age of the children at which it attacks them, their resisting-power is low; it most often attacks those who live in unhygienic surroundings and are poorly nourished and much exposed; because of its wide distribution in the lungs; and because it complicates other diseases that already have lowered their vitality.

The reason why we have bronchopneumonia in children, instead of lobar, is, because the bronchial element predominates,

their resisting-power is low, and they are not able to circumscribe it.

The Diagnosis

The diagnosis, except in a few cases, is usually not very difficult. The onset is nearly always acute, often coming on in children who are in a poor state of health or associated with some acute disease. The fever rises rapidly, is high, and often fluctuates several degrees in the twenty-four hours. The cheeks are flushed, the skin is dry and hot, and often there is herpes on the lips, which are dry and parched. Ordinarily there is excessive thirst. The respiration is rapid and somewhat difficult and with a grunt at the end of expiration. There is more or less dyspnea and sometimes gasping for breath, with cyanotic lips, face and fingers. With each respiration, there is dilatation of the nostrils. The pulse is very rapid and sometimes irregular. There is always more or less prostration, sometimes quite pronounced. The cough is severe and often almost incessant, thus preventing sleep. There is no expectoration; the secretions are swallowed and thus cause digestive disturbances, as indicated by the vomiting and diarrhea. The nervous symptoms often are prominent, as expressed, at times, in stupor delirium or convulsions. Pain mostly is but slight and not troublesome. The urine is scanty, high-colored, and may contain a trace of albumin and some casts. Nearly always there is present a true leukocytosis.

The diagnosis, if the patient has been seen early, has been made, ordinarily, before the physical signs are found; if it is a central attack, they are obscure and come late. The best physical sign is that of a localized bronchitis. The breathing is bronchovesicular or bronchial, depending upon the condition of the lungs when the examination is made. Crepitant, subcrepitant, and mucous râles are heard, especially over the bases of the lungs posteriorly. Sometimes pleural friction-sounds are heard.

The four most important physical signs are: (1) sudden onset, with a rise in the temperature; (2) increased respiratory rate, with an expiratory grunt; (3) dilatation of the nostrils; (4) signs of a localized bronchitis.

Treatment of Bronchopneumonia

Concerning treatment, it is evident that no definite or routine measures can be

named that would fit every case, so that it must be spoken of only in a general way and it must be modified according to the needs of each individual case. I will consider this subject under three heads; namely, those of hygienic, dietetic, and medicinal measures.

Hygienic.—The child should be in a large quiet room having at least two windows, be well ventilated, but, free from drafts. The air should be at a temperature of 60 to 70 degrees and kept moist by means of steam or wet sheets hung in the room. With plenty of fresh pure air, the temperature is lower, respiration is slower and easier, the circulation is stronger, and the patient is more comfortable.

All sources of excitement should be removed and no person allowed in the room except the mother and nurse. Keep the sick child as quiet as possible and in bed most of the time, or, if too irritable there, let the mother or nurse hold it. Change its position frequently, because of the tendency to hypostatic congestion. Use as little clothing as possible, a simple slip being all that is necessary; for, you will exhaust the patient in getting the clothes off and on for counter-irritation and bathing.

General Hygienic Measures

The care of the skin is very important and frequently receives too little attention. No greasy or oily substances should be applied, as they hinder the skin in its proper functioning. At least one warm bath should be given each day; this removes the perspiration, lowers the temperature, dilates the cutaneous vessels, and tends to relieve the pulmonary congestion and to equalize the circulation. It is essential to aid the skin in its function and warm bathing promotes comfort, the child usually having a good sleep after it. A cold bath is not necessary; even with severe nervous symptoms present a tepid bath is all that is needed. These patients never are too ill to be bathed. For the bath, they should be removed to a warm room, the sick-room meanwhile being well aired.

The mouth, tongue, and tonsils also require close attention, which nearly always is neglected. They should be kept perfectly clean by the frequent use of some mild antiseptic solution, such as Dobell's or of boric acid or potassium chlorate. If there is a tendency to sore mouth, diluted hydrochloric acid is valuable, and if small ulcers

appear touch them with solution of iodine or silver nitrate, 10 per cent.

As to Nutrition

In all acute febrile conditions, the digestive powers are diminished and are easily upset, as is shown by the vomiting, diarrhea, and loss of appetite. Consequently, this must always be borne in mind as a guide in feeding these patients.

The nutrition of pneumonic children is of the utmost importance and is sometimes a most difficult problem. They must be nourished in the best possible way and given only those foods that are nourishing and as much in amount as can be taken without disturbing the digestion. Still more. If the child still is nursing, it is not so difficult, as a rule, since the breast-milk composes most of the diet and very little other food is needed. In older children, the diet should consist mostly of milk and be as free as possible from cream and other fats, as these are not well borne and upset digestion. Fat must be given in small quantities, for, in any disease, where one is sick for more than a few days, all the elements of nutrition are necessary. In that case, fat must be given in moderation and carbohydrates more abundantly; not enough to cause excessive fermentation in the intestines, still, enough to prevent acidosis from inanition. These may be gotten from milk, rice, milk-sugar, oatmeal, toast, and crackers. The salts may be gotten from the addition of lime water to the milk and that used in the preparation of the food. The necessary proteins can be given in the form of milk, meats, and meat-juices, jellyed egg, and egg-albumen.

Prepare the food well and feed at regular intervals. Do not disturb the patient during the night, if that can be avoided; still, take advantage of the opportunity to feed when he is awake. If food is refused because of delirium or stupor, forced feeding may be resorted to—after the stomach has been washed, it is of advantage to feed through the stomach-tube, in which case the intervals of feeding should be longer, however.

Unless there is retention of fluids in the body and the circulation is feeble, offer drinking-water freely. If this is refused, as it frequently is, it can be given in the form of lemonade, which is more palatable. Water taken in large quantities renders all the secretions of the body more fluid and causes free secretion of urine and perspira-

tion, thereby eliminating toxins and waste products; it also strengthens the circulation, by giving volume to the blood; it keeps up blood pressure, acts as a laxative, and lowers temperature. If enough fluid is not taken by mouth, salt-solution (physiologic) can easily be introduced into the rectum.

Drug Treatment in Bronchopneumonia

This very important part of the treatment should be executed intelligently, but, unfortunately, many times it is very much abused, and much useless and harmful drugging is done.

It is a good rule to give only those drugs that are indicated, to give none until there is an indication, and to stop when this indication has disappeared. Drugs may upset the stomach and cause inanition, this being relieved by discontinuing the drug, when it would be made worse by giving more drugs. Give all medicines required at one time, so as to disturb the patient as little as possible. Also, do not give the medicines in the food, but, give them in water or simple elixir.

In the beginning, it is well to give a mercurial and follow with a dose of castor-oil or of equal parts of the latter and syrup of rhubarb. The bowels should move at least once a day, and for this, if needed, castor-oil and rhubarb-syrup may be given every day or every other day, and an enema of soapsuds or water and glycerine every day. Diarrheic stools are not wanted, as this takes too much fluid from the body and weakens the patient. If there are more movements than four in the twenty-four hours, they should be checked by cleansing the intestinal tract by means of irrigation of the colon and giving drugs, antidiarrheic, such as tincture of opium (deodorized), paregoric, Dover's powder, bismuth or morphine if needed.

There is a tendency to fermentation and flatulence, which must be relieved, because it embarrasses respiration through pressure against the diaphragm. The best remedy for this is, the rectified oil of turpentine, which also has an antiseptic action on the lungs, as it is largely eliminated in that organ. The sulphocarbolates, salol, and dilute hydrochloric acid also are good.

The Management of the Fever

The temperature in children does not rise and fall with the severity of the infection, as it does in adults; hence, it is not so especially valuable as a criterion

here. Slight infections may cause a high temperature, with few, if any other, symptoms, while severe infections may be accompanied by a low temperature, but, with other marked symptoms. So, as our guide, we must not rely so much upon the thermometer as upon the attending nervous symptoms.

In bronchopneumonia, a temperature of 104° F. is normal, and when it does not go above this there is no need for interference, unless other symptoms are present, especially restlessness, nervous symptoms, and discomfort. When it goes above 104 degrees, give a tepid bath and put an ice-cap to the head. If the temperature still remains high or continues to go higher, give a tub-bath, beginning with the temperature of the water at 110° F. and gradually reducing it to 90, by adding cold water or ice. Rub well while bathing and keep in the bath ten to fifteen minutes. If the temperature still continues to go higher, give a cold pack.

Strip the child and wrap in a towel wet with water at 100 degrees and rub ice over the towel or sprinkle cold water over it or apply other towels wet with water at 95 degrees, and gradually reduce the temperature of the water to 80 degrees. Place a hot-water-bottle to the feet and keep in the cold pack ten or fifteen minutes, then rub well with a dry towel, and lastly, wrap the patient in a blanket and let him sleep.

Rectal irrigations are easily given and useful. Begin with water at 90 degrees and reduce to 70. Equal parts of alcohol and water or vinegar and water makes an effectual sponge-bath, which is pleasant to the patient reduces fever, and also lessens restlessness.

Antipyretic drugs are more or less depressant to the circulation and should not be prescribed unless the other measures fail or they are needed to allay nervous irritability.

Counterirritation is very valuable, especially in the early stage, to relieve pulmonary congestion. It is best given in the form of a mustard paste, made into a thin paste with one part of ground mustard, four parts of flour and water, and then spread on thin muslin. Apply this over the greater part of the chest and leave until the skin is red, which is usually ten or fifteen minutes. Do this several times a day. This relieves pulmonary congestion,

facilitates respiration, and makes the patient more comfortable.

Symptomatic Treatment

Some medicine usually is needed for the cough, but, it should not be given in a thick syrup, as this has a tendency to cause fermentation and flatulence. The best drug, as a routine, for the cough (which may be almost incessant) is aromatic spirit of ammonia, 5 minims, for a child of one year. To this may be added paregoric, 5 to 10 minims; codeine, 1-20 grain, or Dover's powder, 1-4 to 1-2 grain. Ammonium chloride is good, if needed to thin and promote the bronchial secretions. Inhalations of creosote, oil of turpentine, and tincture of benzoin are good.

The pain is usually not severe enough to require treatment; if it is, a mustard paste often is sufficient, if not, some opiate is called for.

If the nervous symptoms are marked, with loss of sleep, restlessness, delirium, and a tendency to convulsions, give a hot bath; also 1-2 grain of chloral and 5 grains of sodium bromide by rectum, every three hours. If this is not retained or does not control the symptoms, give, to a child of one year, a combination of 1 grain of Dover's powder, 1 grain of phenacetin, and 1-2 grain of caffeine, as often as is necessary. Give this only when the chloral and bromide, and one bath do not control the symptoms.

The chief circulatory stimulants used are: caffeine, camphor, strychnine, digitalis, strophanthus, adrenalin and alcohol. If digitalis is used, the fluid extract is the best preparation, in the dose of 1-2 minim to a child of one year. Strophanthus is less irritant to the stomach and is better borne than digitalis. Give 1 drop of the tincture to a child under one year, every two or three hours. It is indicated in a pulse of 150 or above. If the pulse is irregular, give strychnine, 1-300 grain to a child of one year, or 1-200 grain to a child at two years.

In the sudden attacks of collapse and prostration, adrenalin and camphor are the most reliable drugs. Give 2 to 5 minims of a 1:1000 solution of adrenalin, and 2 to 5 minims of a 10-per cent camphor solution in oil. These are given hypodermically. If the extremities are cold and there is cyanosis, give 1-300 grain of nitroglycerin to a child under three years; also apply

a hot-water-bottle to the feet. A hot mustard-bath also is good.

The question of giving alcohol and of its action still is in dispute, still alcohol is very useful and gives good results, as is found by clinical experience. It is good, not only as a medicine, but, also has some food value. It is well borne by children and should be given in the form of good whis-

ky or brandy. To a child of one year, do not give more than half an ounce in the twenty-four hours. Dilute it well and give at frequent intervals.

These remedies will meet the needs of most of the cases. After convalescence is well under way, tonics may be needed, while each case will have to be treated as the individual circumstances require.

Observations on the Treatment of Acute Endocarditis

Three Cases of Endocarditis, Developing in Girls in the Same House

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

I WISH to report two cases of endocarditis occurring in young girls, sisters, and the only children in the family, and to bring out a few facts as to treatment.

Both girls had attacks of tonsillitis, chorea, rheumatism, and resulting cardiac trouble as a sequel—both had two attacks of acute endocardial inflammation, followed by cardiac decompensation, with kidney breakdown. Both girls had not begun to menstruate, although almost fifteen years of age. The attacks in both instances came on when they reached the same age. The older girl died several years ago; the younger one has just gone through a severe second attack of acute endocarditis and is now suffering from a marked enlargement of the heart—one of the largest hearts I have ever seen in a child; cardiac decompensation and parenchymatous nephritis, with general anasarca.

Case One

This latter child was treated by me, for the first attack of acute endocarditis, in January, 1916, when she was twelve years old. She complained of pain in ankles and shoulder joints and had a sore throat. Her temperature stood at 101.60 F.; pulse, 120. A few days later, she had a chill and was very sick for three or four days. She then felt better, but, on January 28, she complained of pain over the heart and again had a sore throat. On February 2, the left shoulder and later the right shoulder became inflamed. The temperature varied from 100 degrees to 102+ degrees F. She also had a slight cough. The loud, widely

transmitted murmur was heard best over the apex. The apex beat was in the nipple-line. The urine contained neither albumin nor casts; the urea amounted to 1.5 percent; other tests were negative.

February 12: Slight cough, worse at night; pulse, 120. February 20: presystolic and systolic thrill felt; mitral stenosis and regurgitation; presence of pericarditis, recognized by the pain and friction-rub; lungs and liver normal; some anemia; heart dullness slightly increased.

The treatment of this first attack of endocarditis consisted in giving an iron-ionic pill, blisters over the heart, the application of an ice-bag, and absolute rest in bed for about eight weeks. The patient received no digitalis.

Now as to the girl's previous history. She had an attack of German measles when two years of age, and measles, a severe attack, at four years. She had a slight attack of chorea four years ago. Had tonsillitis several times; also rheumatism. Also had chicken-pox. Had no scarlet fever. She was normally delivered. She had one sister who had had two attacks of endocardial inflammation, first attack of four weeks when 10 years old, last attack when not quite 15 years old. Was sick nearly four weeks. Had had measles, also a few attacks of tonsillitis. Had not menstruated. She had chorea and also mitral regurgitation, with loud systolic murmurs. Her mother had had several miscarriages and one baby still-born at term. The Wasserman test, both in father and mother, was negative.

The patient was all right and able to come to my office several times in April,

* Read before the Camden City (New Jersey) Medical Society, December 4, 1917.

1916. During this interval, the tonsils were removed and several tooth cavities (molars) filled.

The patient continued all right until May 18, 1916, when she had pains in ankles and knees, and on May 24 her finger-joints were involved, also. She was feeling much better on June 5. Was in Atlantic City all that summer and felt "all right." A year later, on July 30, 1917, I was called to Atlantic City, to see the girl. I learned that she had been sick for three or four days and had had a temperature of 103+ degrees. There was pain over her heart and rapid respiration and pulse. August 8, the blood-test gave the following: No distorted R. B. C.; R. B. C. 3,500,000; W. B. C. 13,000; Hb. 65 percent; color-index 0.9 percent. Differential: Polys. 79 percent; lymph. 19; large mono. 1 percent; transitional 1. Urine test; Few hyaline casts—short, medium width, pale; trace of albumin; excessive indican; urea, 2.8 percent; no R. B. C.; S. G., 1.029.

I gave her pills—one three times a day—consisting of

Ferrous carbonate	grs. 3
Gentian, extract	gr. 1
Sodium Arsenate	gr. 1-40

A bacteriological examination of the blood could not be made. The cultures from the throat showed streptococci and staphylococci. The Widal reaction was negative.

Treatment: Rest in bed; ice-bag; iron-tonic pill; blisters. No digitalis had at this time been given, and no edema had appeared at any time, so far.

Combating the Edema

September 23: Slight edema of ankles was noticed for the first time. The patient had some pains in the middle joints of several fingers and in one knee. I prescribed the same pill (same dosage) as above, with the addition of 1-2 grain of quinine bisulphate. Blisters seemed to relieve pain and ease respiration. When the temperature came down, she was given digipuratum, 1-2 tablet, every night and morning. For the anemia, we tried a few doses hypodermically, of iron and ammonium citrate. When the urine began to diminish in quantity, she received 5-grain doses diuretin (theobromine-sodium salicylate) with 1-4 to 1-2 grain of powdered squill in capsule. After two days of this treatment, namely, at first digipuratum and then diuretin with

the squill, the edema was relieved and there was increased flow of urine.

On two different occasions, when the edema had disappeared, were we successful with the foregoing treatment. Later, she became very dropsical and during the third "spell" this same treatment was without success. Eventually, the patient became very bad. We were dealing, of course, with a decompensated heart during the two previous occurrences of the edema of the legs, while now there was superadded a severe parenchymatous tubular nephritis. Both the citrate and the acetate of potassium, Basham's mixture, digipuratum, all failed. I may state that the heart was working at its maximum, that, to my mind, the heart was doing all that could be expected of it. The heart was markedly enlarged and the patient was absolutely unable to lie down (orthopnea); and she had been sitting up for the past few weeks, owing to the greatly enlarged heart. (The curvature of the spine, brought about by her position, allowed for this enlargement; the anteroposterior diameter being larger in this position).

I used the Southey tubes, and drew off 1 1-2 quarts of fluid in twenty-four hours or less; on another occasion, two quarts of fluid were drawn off from the legs in eighteen hours. I also made multiple incisions in the thighs and legs, and applied warm moist dressings and hot-water-bottles. She was given caffeine sodium benzoate, 1 grain, hypodermically, and theocin, 2 grains, by mouth, was tried; but, these had to be stopped at the end of forty-eight hours, because of consequent nausea and vomiting. Agurin (theocin-sodium acetate), 5 grains, was then tried with good results. To this, there was added the hot wet-pack, for the reason that the hot dry-pack was found ineffectual.

An interesting fact noted was this: Urine specimens taken either before or during or after the hot-pack showed wide variations, as did also T. P. R. There was an increase (500 percent) in the number of casts thrown out, and also in the amount of indican.

Of course, all these theobromine-, theophylline-, and caffeine-containing drugs after a while caused restlessness and increase of the insomnia already present. Thus, it is advisable to continue these remedies only for a few days at a time. After the de-

sired results were obtained, she was given a mixture containing

Potassium citarte	grs. 5
Potassium acetate	grs. 5
Infusion of digitalis, U. S. P., freshly prepared	dr. 1

During the marked failure of cardiac compensation, the patient seemed to take the digipuratum tablets much better than any other digitalis preparation. The blood pressure (by auscultation over the arm) was 115 to 120 systolic, while the diastolic varied from 40 to 0. Over the leg, the diastolic pressure was 30 to 40 points higher.

November 8: Urine: Over 50,000 casts per ounce; 32 percent by volume, albumin; specific gravity, 1.036; much urates. She voided only 6 ounces or thereabouts on this date. Had a dry, brown, leathery tongue. November 20: She voided 31 ounces from 8 a. m. to 10 p. m. Urine: Albumin, heavy cloud; casts, many hyaline, leukocytic, and granulated casts. Indican, decided. Urea, 3 percent. Specific gravity, 1.027.

During this critical period, the heart was doing its share of work and did not appear to be the chief offender. We were now dealing with a marked nephritic complication. On account of nausea and the tendency of caffeine to irritate the stomach, caffeine-sodium benzoate or salicylate may be given hypodermically—preferably the former (as the salicylate may be depressant to the heart) or by rectum. Experience has shown that, when the kidneys have lost their ability to eliminate water, they also have lost the power to respond to diuretics; therefore, the results of our efforts with the ordinary forms of treatment often are of no avail, and the only recourse to obtain even only a temporary improvement is by a combination of methods of treatment. Finally and eventually, of course, nothing helps.

Occasionally, dropsy is very variable in its response to treatment—and at times, after the patient has been very dropsical for weeks, the urine may suddenly begin to flow and the patient recover.

It may be because of such tendency of dropsy suddenly to disappear coincidentally with the administration of some given drug that some wonderful results are attributed to this or that particular drug or treatment.

Notes on the Heart's Condition

My notes as to this girl's cardiac condition show that her cardiac impulse is very diffuse, occupying the anterior left chest.

Her heart dullness is from inside the right nipple, nearly an inch and a half to the right of the sternum to the midaxillary line, and from the lower border of the second rib down to the liver dullness, the apex beat being best felt and seen a little outside the midaxillary line. Over this area, the cardiac impulse is very distinctly seen. On auscultation, the heart sounds are rather rapid and there is a distinct mitral murmur; no distinct friction and no Broadbent sign is present.

There is some pulsation of the vessels of her lip and some regurgitation into the anterior jugular artery. The liver is felt about 3 fingers' breadth below the ribs. No Corrigan waterhammer pulse is present. It is very difficult to determine, and one may be very easily mistaken, in a heart of this sort, as to the actual valvular condition. I feel reasonably certain, however, that there is here a mitral regurgitation and a mitral stenosis. There probably is no fluid present, because of the prominence of the heart's action and because there is *no dullness posteriorly*. If there were any liquid, the heart would have to be adherent to the pericardium anteriorly (adhesive pericarditis) and there would then be dullness posteriorly, on account of the fluid. The tremendous size of her heart could be due to mitral stenosis, with the consequent dilation of the right heart; but, if the area of cardiac dullness were due to a dominant mitral stenosis (alone), then it would be accounted for only by a right-sided dilatation, the heart lying directly across the chest, with the right auricle on the right and the right ventricle on the left. The auricle and left ventricle would be posteriorly and would not be felt and seen (atrophy). Dr. M. Howard Fussell of the University of Pennsylvania, reported such a case (after necropsy) in *The International Clinics*, and which he briefly refers to in his textbook, on page 425. However, the apex beat is sharp and forcible, and the impulse is very strong in the sixth interspace outside the midaxillary line—and certainly, seems to me to be due to a left ventricular enlargement.

On auscultation, a loud systolic murmur is heard over the heart, loudest at the apex, but, audible elsewhere, even in the back. At the tricuspid orifice, the systolic murmur is very soft. At the right edge of the sternum, in the third interspace, a superficial to-and-fro murmur can be heard. The

diastolic murmur is not transmitted to the left or downward. There is no arrhythmia, except only when under the effect of full doses of digipuratum, and then digitalis is promptly stopped. No extra-systoles are noticed, except on one or two occasions. The presence of aortic regurgitation can, I believe, be ruled out. There are no features of that condition present. The to-and-fro murmur mentioned may be due to a slight pericardial rub at the point where it is heard. My opinion is, that the marked hypertrophy and dilatation are due to a dominant mitral regurgitation, associated with a probable mitral stenosis.

November 22: Urine: morning: Albumin, trace; urea, 4.2 percent; indican, decided amount; casts, very many, 500 in one ounce; specific gravity, 1.027. Afternoon: Albumin, decided trace; urea, 4 percent; specific gravity, 1.026; indican, decided amount; casts, over 100 to the ounce. The patient being very weak and exhausted and complaining of abdominal gaseous distention, she was given iron, quinine and strychnine; multiple needle punctures were made in the legs and dorsal surfaces of the feet, which drained freely; also, one-half ampule of pituitrin was given hypodermically. This procedure seemed to increase the flow of urine and relieved the patient considerably.

What Experience Has Taught

The important things to bear in mind are: (1) The very great importance of rest in bed. (2) The most careful attention to complaints of sore throat, pains in joints, and various ailments or complications associated with fever; and bad teeth and tonsils should be looked after. (3) To give no digitalis, because you hear a murmur, in a case of acute endocardial inflammation. It is contraindicated and will make the patient worse. (4) Give an active preparation of digitalis during the afebrile period following the acute attack, and only until the desired results are obtained. (5) With failure of the heart, the appearance of dropsy and nephritic complications, and where the ordinary alkaline diuretics usually will do no good, we must try a combination of methods: (a) Incisions or punctures in the lower extremities or the use of Southey tubes, (b) Wet hot-pack, (c) Restriction of intake of fluids and administration of preparations such as diuretin, theocin, thephorin, agurin, or caffein-sodium benzoate, and with or without digipuratum by mouth or hypodermically, or 10 minims of fluid

extract of apocynum cannabinum or its active principle, cymarin, 1-200 grain, in ampule or pill, three times daily. (d) The bowels, of course, should be kept in good order. Multiplicity of internal remedies is to be avoided—only one or two drugs at a time are to be given as indicated. (6) Blisters over the heart during the febrile stage, especially if pericarditis be also present, are worth remembering, as they give great comfort to the patient. In the case under discussion, I am sure that the blisters helped to prevent effusion during her first attack of endo- and pericarditis in January, 1916. (7) To combat anemia, the hypodermic use of iron may be tried, beginning with small doses at first. (8) These young patients complain of insomnia and restlessness, and it is important to give them rest. For this, a small dose of morphine sulphate or codeine may be used hypodermically, or a capsule of chloretone, 5 grains, and a little codeine may be given as needed. Very small doses—1 grain every two hours for 5 or 6 doses—of chloral may be tried. This amount will not cause cardiac depression.

As to the third case, occurring in a young girl, at about the same age, she also had some trouble associated with puberty and delayed menstruation. This girl, I learned on inquiry, had previously also lived in the same house, and she, too, had some cardiac disturbance of a similar character. I have, however, been unable to verify the matter myself any further or to learn any more particulars about the case, and mention it merely as a matter of interest.

Endocarditis is of frequent occurrence during infancy and childhood, most common between the 6th and 12th year.

Endocarditis nearly always begins with fever. When a child has chorea and then suddenly develops fever, endocarditis should be suspected. When a child has a chill and fever develops shortly after an attack of rheumatism, tonsillitis or any other infectious disease, the heart always should be examined for evidence of endocarditis or pericarditis.

The pericarditis, if present, can be recognized by the friction-sound—a superficial, to-and-fro sound heard directly under the ear, usually loud and rasping, never blowing, sometimes creaking, and loudest over the middle of the heart; it is not conducted or transmitted like murmurs and is made clearer by having the patient lean over on

the stethoscope; and is not affected by having the patient hold the breath, except that it is probably made more distinct.

Streptococcic Vaccine in Tonsillitis

Several years ago, I treated a child for streptococcic tonsillitis, which was followed by an acute endocarditis. In conjunction with absolute rest in bed, blisters, diet, and only symptomatic drug treatment, I also administered streptococcic (mixed) vaccine. The patient recovered from the attack. I can not, of course, state that the vaccines were of great influence in this case, as the other measures mentioned also were used in the treatment.

I have now under my care a woman about forty-five years of age, with some acute endocardial involvement, who just passed through a severe attack of pneumonia.

This patient, in addition to digipuratum for the heart, guaiacol carbonate and codeine for the pain and cough, and camphor in oil, hypodermatically, at the time of the crisis, received antipneumococcus serum intravenously and intramuscularly. She was given 100 mils (Cc.) of Lederle's antipneumococcus serum (type I) as the initial dose. (The crisis occurred, without any mishap, a few days ago.) Before its use, I felt that she was going to die. Under mild stimulating treatment, continued rest in bed,

and the use (after crisis and recovery from the lobar pneumonitis) of mixed pneumoserobacterin, she is gradually recovering from the attack of endocarditis, and will, I hope, be out of bed in a very short time.

In conclusion, I wish to add that in two other cases of endocarditis, following a pneumonia (pneumococcal), which, in turn, was preceded by severe attacks of tonsillitis, polyvalent vaccines were used, along with the rest in bed and ordinary symptomatic treatment. In these two cases, occurring in children, the pneumococci were demonstrated by cultures from the tonsillar patches, and shortly after these attacks the children developed physical signs of pneumonia, evidently caused by the same germs. The vaccines seemed to be of considerable help.

Digalen and cymarin (1-300 to 1-200 grain) were used, chiefly the former, as the cardiac stimulants during the pneumonia and again during the afebrile decompensatory period following the endocarditis, with excellent results. The ouabaine (a more active drug than the official strophanthin when used intravenously or subcutaneously), is absorbed so slowly and so variably when given by mouth as to make it unsafe, so that the cymarin was preferred; besides, my results from ouabaine were very slight.

The Electrical Treatment of Deafness

By C. S. NEISWANGER, M. D., Chicago, Illinois

THE shoemaker should not judge above the last," nevertheless I am induced to write this short article on the treatment of deafness, this very common, but, distressing ailment, without offering any apology to the aurist, in the belief that it may help him no less than physicians in general. I will present several case-records:

Case 1. A young woman, a school teacher, who desired to enter the normal school, failed to pass her physical examination on account of defective hearing. She consulted me, but, I told her I did not treat ear troubles and recommended her to a first-class aurist. In about one month she returned, stating that the ear-doctor had done her no good and that she now wanted electrical treatment.

I then consulted the aurist who had treated her and asked him what the conditions

were in the case. With a broad smile, he said: "With few exceptions, all these cases of deafness are alike. The patient has a cold in the head, the inflammation extends by way of the eustachian tube into the middle ear; the ossicles are inflamed, an exudate is thrown out around them, this impairs their freedom of vibration, and the consequence is dullness of hearing. In time, this exudate shrinks and hardens, with consequent further loss of hearing until eventually complete ankylosis takes place and the patient is deaf."

As this patient was determined to have electrical treatment, it did not take much study on my part, after what the aurist told me, to select the modality best suited for the case, namely, the Morton wave-current. So, an electrode was devised by me, suitable for the purpose. Needless to

say that the current for the treatments was obtained from the static machine. The manner of employing this appliance is as follows:

The Leyden jars are attached, and, for treatment as delicate as this, should be rather small ones. The ordinary jars, however, will answer, only more caution is required with them. If there is a switch-point on the machine, this must be placed on the "spark" mark which will connect the outer coatings of the jars; or else, the outer coatings may be connected by a metal rod or chain. Absorbent cotton is now twisted on the distal ends of the electrode and so pointed as to enter the aural canal. The cotton is wetted and the electrode placed in position on the patient, who sits on an insulated platform. The electrode is then connected to the top of one of the jars by a suitable conductor. The top of the other jar is "grounded" by connecting it with a water-pipe.

The machine is now started, with the balls on the prime conductors actually touching, and after the machine starts to generate the balls are carefully separated until the limit of tolerance of the patient is reached. This rarely exceeds 1-2 inch distance, but, generally 1-4 inch is all the patient can stand. The sittings are continued for ten minutes, and are to be repeated daily.

The patient in question was discharged after one month of treatment as described, the hearing being absolutely normal.

Case 2. In May, 1916, a farmer presented himself for treatment giving a history of increasing deafness for the past three years, until, at the present time, he had not heard his wife's voice for four months.

He was treated daily for five weeks, as herein described, when he could hear the ticking of a watch at 12 inches. He has had no relapse thus far.

Case 3. A woman, housewife, first noticed that she was getting "hard of hearing" about seven years ago. She could hear

scarcely anything of ordinary conversation and had given up using the telephone. I tested her hearing at different periods during her treatment, but, could perceive actually no improvement and despaired of doing her any good. At last, after five weeks of the course, however, she said one day: "Well, doctor, I shall not be back for any more treatments, for, I hear as well as I did ten years ago and can now hear perfectly on the telephone. I was improving right along, but, would not tell you, fearing that the trouble would return." I tested her hearing and was surprised to find that she could hear the watch perfectly at a distance of 42 inches.

Case 4. This case is quoted on account of its prolonged chronicity and the final happy result gained from this treatment. A spinster of fifty, who had been engaged in missionary-work in China for twenty years, had, during the last ten years, gradually lost her hearing and grown almost totally deaf, and, so, forced to give up her missionary-work, had returned to this country where she came into my care. I gave her these daily treatments, as described, for seven weeks, and by that time her hearing was so nearly normal that she returned to China to resume her missionary duties.

The routine in these cases has consisted in massage by means of a suction-pump. This massage is purely passive and is very similar to that practiced by ordinary operators using their hands for manipulating the muscles. The massage given by the Morton wave-current, as described in this article, is entirely different, and not only acts upon the muscles, but, upon the nerves as well. Every time a spark passes between the prime conductors of a static machine, oscillations are set up from a few to many millions a second. These oscillations, or vibrations, are conveyed to the nerves, which, in these cases, have lost their normal vibratory tone, but, will again be restored to their normal rate by taking from this current the vibration that suits them.

Varix and Varicose Ulcer

By GEORGE H. CANDLER, M. D., Chicago, Illinois

UNQUESTIONABLY every practitioner has some particular *bête noir* that turns up every so often to cause him chagrin and humiliation. "My pet antipathy,"

confessed a really well-informed and busy man to me not many months ago, "is rheumatism, yet, to my certain knowledge, every rheumatic old person within ten miles of my

office has come to me for treatment. That the most of them still have stiff joints or pains in various parts of their anatomies in bad weather or 'before a storm,' would seem to be damning proof that I do not know how to treat them, though I am sure I have spent more time reading up on the subject and have tried a greater variety of therapeutic procedures than any of my local confrères, some of whom quite cheerfully continue to treat 'rheumatism' with turpentine liniment and lithia tablets. However, as they secure therewith quite as good results as I do, I am hardly in a position to criticize; still, I am more than ever convinced that medicine is not yet an exact science and feel that the surgeon 'has it all over us.'"

That Awful Ulcer

I have been favored with perhaps a hundred confidences of this nature and have come to the conclusion that nine times out of ten it is some minor and comparatively simple disorder that succeeds in upsetting the doctor's equanimity. Excluding (1) the gentleman who "very much disliked delivering twins around dawn," but, had office-records of four such cases, (2) the physician who "never wanted to see another case of mumps, because all his patients had orchitis," and (3) the doctor who mournfully stated that he was most distressed and inefficient when called upon to treat "pediculosis capitis in a large Swedish family," it has been found that out of ten men four expressed it as their firm conviction that chronic ulcers of the leg were expressly designed by Satan to harass the practitioner of medicine. Two briefly stated that varicose veins—up to that time at least—"had them going." Later, doubtless, they will join the other four and lift their voices in denunciation of the varicose ulcer, and, if the entire half dozen have but one-half the experiences that I have gone through with "indolent, callous, chronic, irritable, erythritic, neuralgic, exuberant, and eczematous (whatever they may be) ulcers of the lower third of the leg, in individuals past middle age," they will flee by the back door or window or whenever the office-girl announces the arrival of such a patient. Naturally, they can not escape the first visit or dressing, but, once they know that the ulcer has returned, they can, with perfect propriety, say goodbye to their stricken families and hasten to serve their country "somewhere in France." And even there, if the

demand for men continues and the medical examiners get a bit less particular, they may have the extreme felicity of treating, first, phlebitis and, later, varicose ulcers upon the legs of soldiers who were passed into the army with "slight varices of the internal or external saphenous veins."

One of my most esteemed preceptors taught that individuals either die decently *en masse*, from the ends, as in gangrene, for example, or in small pieces, as in ulceration. His theory was eminently correct, but, it has been my experience that, while circumscribed molecular death proceeds regardless of the most skilfully planned opposition, the body corporate blessed with a varicose ulcer lives forever.

If It Could Be Seen Early

Under the circumstances, it becomes our bounden though most unwelcome duty to study this lesion from the inception of its being to the bitter end and, as we progress in knowledge, we shall discover that the only really satisfactory way to proceed is, to prevent, wherever possible, the establishment of conditions that lead to the formation of such chronic ulcers. Unhappily, people do not always consult a physician when they first observe unduly prominent or tortuous veins on their extremities; yet, even should they do so, we have been so long in the habit of ordering an elastic stocking that it may prove difficult to convince ourselves that a comparatively trivial operation affords the one sure way out of the dilemma, while also assuring us—in a measure, at least—against later having to treat for months or maybe years a chronic leg-ulcer.

It is, of course, quite ridiculous to point out the necessity of examining the entire leg carefully before making a diagnosis; however, such procedure is essential, while it also should be borne in mind that more than one patient has worn (and some may even now be wearing) a femoral truss when there really is no rupture, but, merely a varix of the internal saphenous vein. It will be remembered that just before the entry of this vessel into the common femoral an ampulla is formed, which, under certain circumstances—especially in women—may become very much dilated. This swelling is marked when the patient stands, disappears when she lies down, and has an impulse when she coughs; hence, should the patient state that she is ruptured, the doctor, con-

fronted with such definite earmarks, might concur in the lay diagnosis and apply a truss. Careful inspection of the lower leg would, most certainly, have revealed varices and thus obviated a great deal of later embarrassment.

Differential Diagnosis

Here, the following incident may prove instructive. A certain surgeon had a patient with known varix sent to him by an unusually competent physician, with the request that he operate for hernia. The man was wearing an elastic stocking and showed in Scarpa's triangle a swelling closely resembling a femoral hernia. It appeared when the man was erect, disappeared when he lay down, had an impulse and could be pressed back. The diagnosis here appeared certain; however, the surgeon, by nature inclined to thoroughness and moved to extra care by divers past experiences, applied a stethoscope to the swelling and there heard a very pronounced venous hum. The operation subsequently performed was not for hernia. After all, the diagnosis of varicose veins may not be as simple as one would imagine.

Nine times out of ten, however, we shall have to deal with quite obvious varicosities of the lower leg. In some cases, the dilated tortuous veins may appear as though they would rupture at any moment and, naturally, the patient is extremely worried and wants to know whether there is any danger of his bleeding to death. It is safe to assure such a one that no such disaster impends, for, the wall of varicose veins is thick and, unless inflammatory changes have caused adhesions to the skin, bursting of the vein is most unlikely, save as the direct result of violence or undue constriction of the leg. Moreover, even should such an accident occur, prompt assumption of the prone position and application of a pad and pressure over the ruptured vein will prevent any serious hemorrhage. Nevertheless, in almost every such case, operation should be earnestly advised, indeed, insisted upon, if the patient be compelled to stand for long periods or perform manual labor. It not alone is a question of danger to the individual, but, one of his efficiency.

Persons afflicted with varicose veins become, as the day advances, extremely tired and by night "can hardly drag their legs along," or may complain bitterly of the heat and bursting sensation in their extrem-

ities. If these thus suffer, what must be the distress of an excavator, freight-handler, car-man or structural worker before the whistle blows?

Put Yourself in the Other Fellow's Place

It occurs to me that we might all be better physicians if we earnestly tried to put ourselves in our various patients' shoes for a minute or two before prescribing for their ills. Were we to do so, we should not fail, I am sure, to impress upon an individual having varix his liability to contract phlebitis, with an almost inevitable long confinement to bed, to say nothing of the possibility of thrombosis. True, when one thinks of it, few persons with nonseptic phlebitis and thrombosis of the veins of a leg die therefrom; but, they are particularly prone to acquire varicose ulcers—from which they and the medical attendants should be delivered at any reasonable cost and at an early period!

The pain in varicose legs by no means is measurable by the extent of the varix. Sometimes the veins may be enormously dilated, and, yet, the patient will state that he experiences little or no pain. Contrariwise, a few hardly discernible vessels will cause unbearable distress; indeed, in not a few instances, the atrocious cramps, which usually become worse at night, may so undermine a patient's general health as entirely to incapacitate him for business. Here, however, excision or tying-off of the veins may not be necessary. In more than one case, free purgation, the somewhat prolonged use of hepatic and circulatory stimulants and dilation of the anal sphincter have brought about a permanent cure. As a matter of fact, in every case in which operation is refused or temporarily not called for, some such procedure is indicated. Indeed, it is most essential that constipation be overcome and equally necessary that cardiac, renal, and hepatic abnormalities be corrected.

The particular remedies to be employed will, of course, depend upon the conditions encountered, but, full doses of blue mass and soda, followed in six or eight hours by a laxative saline, materially relieve portal congestion. Then the patient well may receive small doses of resin of podophyllin or chionanthus after his meals, and hydrastin or, better, berberine, with strychnine, every four hours. Though I am unable to explain its exact action, I have also had

most excellent results from the use of hamamelin.

Of course, in every instance, the patient should wear a supporting woven bandage (elastic stockings are objectionable); but, if, despite everything, a purple patch makes its appearance on the thin part of the lower leg, you may rest assured that an ulcer already is forming and must prepare to operate.

In short, if you regard chronic varicose ulcers with particular disfavor, pay special attention to varix; treat every case as early and thoroughly (even to the point of using the knife) as possible, and you will, indubitably, be blessed, not only by freely ambulating patients, but, by knowledge that you have successfully put several distressing kinks into the tail of your—and my—*bête noir!*

Impressions of Military Medical Service in the U. S.

By MILES MEDICUS, Somewhere in Camp

EDITORIAL COMMENT.—These interesting impressions of a medical man who, like so many others, was translated somewhat suddenly into the life of a military medical officer—so different from that in civil life—are presented here, because they afford important information, not only for those who have had to remain at home, but, also, for those waiting to be called for duty.

THE writer acknowledges that the greatest difficulty in the readjustment from civil to military life—and especially in that very trying transition period after one's receiving a commission and before being called to duty—has been in regard to trivial details rather than the important principles. On consideration, this is quite natural. Members of the Medical Reserve Corps are generally well informed and of good judgment. They have their medical education and usually an adequate practical experience along professional lines. The conditions which they will encounter in military practice will be novel only after they reach the firing-line or its victims. This statement, however, must not be construed in a too literal surgical sense. It applies equally to certain parasitic and bacterial infections not commonly encountered in civil practice in America; to various nervous lesions and functional disturbances, coming under the head of neurology, psychiatry, ophthalmology, otology, and so forth; also somewhat to other branches of medicine.

Military medical practice in camps in this country, of course, presents many novel phases. One has to deal almost exclusively with a male clientele, of a rather narrow age range, selected as carefully as possible to exclude preexisting chronic lesions and diseases. The environment and discipline minimize cases due to sanitary defects, ex-

cessive brain work, indoor life and so on; while, on the other hand, exaggerating those owing to exposure, strain, and certain forms of dissipation.

After all, though, there is very little demand for skill or experience which the physician has not already acquired. He is simply surprised at the sudden changes in incidence of various conditions and must adapt himself to working without certain conveniences and with an abundance of certain counterbalancing advantages, such as unprecedented control of patients, freely available consultations, and laboratory facilities and assistance, both professional and lay, though in the latter instance not always well trained. Certain drugs and equipment can not be had at all or only by personal provision or through the Red Cross; still, everything that is available is at the command of all, without regard to financial and other handicaps, as in civil practice.

Even though the reserve officer encounters many new professional problems in regard to ways and means and methods of handling cases, he has, in most cases, long been accustomed to adapting himself promptly to even harder emergent circumstances, so that the novel conditions presented by military practice will not, as a rule, give him any trouble. The principal exception seems to be in the case of medical men who, personally, socially and pro-

professionally, may be said to have been born with a silver spoon in the mouth. Yet, as with soldiers generally, uncomplaining adaptability by no means follows expected lines in every instance. Just as the complaints as to food and exposure have come rather from the poorer privates, while boys brought up in luxury have written that their food was all that could be expected or desired under the circumstances and that the rough, outdoor life was a vacation at Uncle Sam's expense, so we find one of the petted darlings of the medical profession advocating an earlier breakfast, which seemed all too early to the ordinary run, and complaining only because more opportunities for hard work were not granted.

Some Free Criticisms and Good Advice

Turning from medical to more strictly military matters, it again is the petty details rather than the broad underlying principles that puzzle the inexperienced. One can very easily comprehend the necessity of loyalty and obedience to orders, the maintenance of discipline, avoidance of too free expressions of personal opinion or conveyance of information, of mutual courtesy, devotion to duty, personal hygiene which now more than ever before involves moral conduct. Anyone who has had experience in any kind of business, even in the management of a practice or hospital or medical society, can appreciate by analogy the common sense of red tape, correspondence through military channels and such like. Contrary opinions come mainly from the erratic, undisciplined, inefficient man who has kept neither clinical records nor business books, who imagines that he can devise better and simpler ways of doing things than have gradually been developed by many men with many years of experience or that any great undertaking can be carried on by the hit-or-miss policy of unorganized personal initiative.

How to carry out these general principles of military discipline in the particular case, is what puzzles the inexperienced. The surgeon, entering the army in peace, with a comparatively small force already in perfect working order, in comparatively fixed local units, with all executive problems, and especially all nonmedical military problems, handled by men of considerable experience, can, if fitted for such a career at all, easily obtain guidance and advice as difficulties arise. Under the

present emergency, the man entering on unfamiliar duties finds that most of his associates are only slightly better informed than himself and are very likely, in any particular instance, either to confess their own ignorance or to advise him in perfect confidence and good faith to do something entirely wrong. If he attempts to read up on the subject, he is very likely to find that the official information applies to the little old standing army, with companies of 50 or 60, small fixed posts, traditions of the Civil War and more recent recollections of Indian fighting, frontier police duty, and the small-scale Spanish War, with the division a literary fiction. He will read of various blue uniforms, officers with swords, allowances for their mounts, strikers for every officer and orderlies for every one from major up, rooms in quarters, field duty in the nature of a practice-march or excursion, in preparation for a kind of fighting that is probably now merely a matter of history.

True, these particular problems may not appeal to him and he may realize that these particular illustrations are in the past tense; however, they illustrate just how thoroughly he will be misled if he relies on reading for any problem. Before being called to duty, he may be utterly unable to seek advice from a regular army officer or, if one is available, he is likely to be one that has been retired, that is full of *passée* information, that is himself overwhelmed with the tremendous changes of the very recent past and present, and, in any case, familiarity with details will, almost inevitably, prevent him from realizing how absolutely ignorant of them the reserve officer is; and, after all, very naturally.

One can get all sorts of interesting stories of army-life of the kind that will never be repeated, of patriotic dissertations, emphatic statements of the importance of keeping one's feet and toes in proper condition, for marches which the medical officer in the present war will rarely, if ever, take, with very little information, however, of the kind that is actually needed. If one were to equip himself as directed even in this year's government publications—not to mention the fact that the literature which, it is said, any reserve officer can get by application to the adjutant-general, may not be forthcoming for months—and reported for duty according to methods stated to be

orthodox, he would make himself a laughing-stock.

The Personal Outfit

Necessary minimum equipment: One wool or serge uniform. (Wool preferred by regular army-men, serge, by evening officers.) This will be used mainly for dress—all other dress uniforms being abrogated for the period of the war—and will last a long time. A khaki uniform and extra pair of breeches. Two flannel shirts and one plain black, narrow four-in-hand tie. One overcoat with horn buttons. Two pairs of tan lace-shoes (not Oxfords). One pair of stiff leather puttees. One cap to match wool or serge uniform, one hat to go with khaki uniform, brown ornament for the former, gold and black cord for latter, knot in front. A tan waterproof (slicker) somewhere near regulation. Underclothes as you have been accustomed to use, for all weather, wool or cotton or both as you personally prefer. Toilet and pocket articles as any man would use for travel and camp-life, as simple, and portable as possible. A small "housewife" equipment for mending. Insignia as specified, preferably one set for each suit, sewed on to prevent loss; and a small set for the shirt collar. A good bedding roll, including quilt, and two blankets. A suit-case. It is somewhat doubtful whether a trunk will be allowed for foreign service. If so, one of regulation size or a box of the same dimensions may be required, though it is probable that a small steamer-trunk will be optional, at least till a foreign port is reached. The various personal belongings specified in the regulations, such as matches, toilet-paper, compass, field-glasses, et cetera, will, probably, not be required in actual practice, or can be obtained anywhere, or will be already on hand.

For ordinary wear in camps even in quite cold weather, khaki breeches and a flannel shirt, with a sweater somewhere near regulation color and style, are generally used. The various regulations regarding horse-equipment, tents, supply of rooms, et cetera, seem to be a dead letter, or, at least, will be enforced by special orders with issue of the things needed. Wash-basins, towels, buckets, et cetera, can usually be bought anywhere and left behind in traveling by train and boat.

For some time, the quartermaster has been unable to supply officers with more

than a few articles, but, it is expected that he will again do so soon, and, undoubtedly, some arrangement will be made for such supply abroad. It is, therefore, unwise to load up for a long time ahead. By using two layers of underclothing and supplementing bedding with the bedding roll used as a sleeping-bag, and with overcoat, et cetera, one need not fear cold weather unless our activities extend to unexpected regions. A separate clothing roll is unnecessary if the bedding roll has an abundance of pockets, and even a trunk may be dispensed with.

Not so much for direct economy as in anticipation of lack of laundry facilities, and to cut down baggage, it is well to follow the old precedent of the regular army in pinning collars into the coat-collar, wearing detached cuffs, or using some form of soft stock as a collar and to take only a few white shirts. Warm gloves should be taken, somewhere near the color of the uniform. Gloves will not be used for dress; merely for warmth.

A very important detail for many men is, to have an extra supply of spectacles and lenses, also of false teeth, and to have the teeth put into good condition before entering service, although good ophthalmologic and probably optical service will be available, while there is an excellent dental staff, though scarcely adequate in numbers.

At a fair estimate, the clothing and other belongings required should cost exactly what corresponding grades of civilian equipment would. Quartermasters' supplies cost about half and may be used for every-day wear, but, are not of the most desirable quality and fit for officers. Dealers show a disposition to charge about twice as much for a military article as it is worth, but, some firms agree to maintain reasonable prices throughout the war. In some places, 5- and 10-cent stores supply insignia of the same grade as have been sold for about four times as much elsewhere.

Points About the Military Salute

After equipment, the next most trivial detail is the salute. The exact description of the salute is difficult and it should be learned from someone experienced and practiced, confronting a mirror. The main point for officers is, not to make the gesture too stiffly. There is a surprising difference in the gesture, despite its theoretic

uniformity. Some privates salute so as to suggest the substitute for the handkerchief; others manage to convey the general impression that they put their thumb to the nose and wiggle the fingers at you, although your own eyes disprove this suggestion.

Forget rules about outdoors and indoors and as to distance. Cover or uncover according to the state of your superior. Learn the insignia of rank. Salute a superior first and an officer of lower grade than your own afterward. Hold the hand at salute till the "Star Spangled Banner" is finished, till the colors have or are passed, till one much above you in rank returns it. Do not expect salutes across the street, between pedestrians and automobiles, from prisoners, from those actually working or in military formation (except that the leader of a detachment on the road or a horseman will salute or expect a salute), nor in the dark, in dense crowds or in public places of business and amusement, and the like. To play safe, always salute one much your superior; always return the courtesy; never try to discipline an inferior for not saluting, unless of your own command or unless intentional discourtesy is obvious; do not repeat salutes in repeated meetings in the same place, any more than you would civilian greetings.

Officers' Ranks Are Indispensable

The pros and cons of rank in a democracy have been threshed out many times. Perhaps the best argument is, the rapidity and instinctiveness with which the inexperienced accept it, even if they argue to the contrary. On the whole, it is far more valid and based on greater justice than the distinctions against which we are protesting and nevertheless defer to in civil life. At all events, rank is established in military organizations everywhere, is compatible with friendship and kind treatment, its injustices tend to correct themselves, and it is unwise for any newcomer to attempt radical changes.

In the present emergency, it should be remembered that rank is an essential factor in the system of conducting a business that has expanded to an almost unprecedented degree in a few months; which, barring certain inevitable delays mostly due to defects and lack of material and labor over which this business had no control, has continued successfully, and has

achieved what everyone prophesied would be impossible. In other words, the U. S. Army has made good under conditions which, applied to almost any private corporation or organization, would have resulted in disruption or paralysis. If you will remember never to attempt to make a short circuit by passing over rank, either upward or downward, to reach an ultimate object, you will solve many difficulties that try the newcomer.

A Word About the Paper-Work

Another terror of the civilian entering military life is what he calls red tape and what army-men call paper-work. Remember, as a cardinal principle, that everything that is done must be recorded, barring, of course, some very minor details. Anyone who has been accustomed to keeping his business matters in a business-like way and of recording his professional doings, as he should, will experience comparatively little trouble. He will realize that, after doing a certain thing, some record of it must be made; that, to secure a desired result he must do something to set the machinery in motion. He knows that however honest and prompt a private firm may be in paying its debts, it will wait for the bill. Things will not start themselves agoing.

Having got this conception clearly in mind, one will, in most instances, realize that some sort of a blank must be filled out. Usually this carries directions that are perfectly clear, although there are some points that may seem peculiar or that will require explanation. In a great many cases, duplicates or triplicates are required, and, for a perfectly good reason, one that will justify itself as soon as you understand just how the system works. In many other cases, you will be surprised to find how simple the matter is and how, so to speak, it takes care of itself, without further responsibility or bother on your part, once you have started it agoing. Of course, at the beginning, you will be surprised to have some ask you whether you have filled out a certain blank or made a certain report. For example, there is the monthly personal report to the surgeon-general, which is not a lengthy diary or a protestation of good conduct, but, a brief memorandum of where you have been on duty and what changes of station, et cetera, you have had. It is no trouble after you are once reminded of it and shown the accepted wording; and it is

a very sensible provision, not only to enable the business center of the medical department to keep track of you, but, to afford you an opportunity to file a record of your activities. It might even constitute a valuable piece of evidence for your own protection; as, for instance, to establish an alibi or a claim of residence.

Most of the tedious parts of this paper-work may be delegated to assistants, and, at any post, most general reports are collected and preserved without further trouble to the maker. For instance, your case-records run through a considerable part of the alphabet and each sheet is marked with the name and rank and organization of the patient. But, the repetitions of the latter entries are made by your wardmaster, if you prefer, when, at any time you can look up a given record and instantly refer to any part of it—family history, physical examination, progress, urine analysis, bacteriologic or radiographic findings, treatment, and so on. The superiority of this method over the average private-practice and hospital-records, where these items are jumbled together or arranged according to systems different for different record-keepers, is obvious.

The real efficiency of the paper-work of the army is well shown by the fact that those who have been to training-camp have little advantage over those who acquire it by perusal of a book on the subject or even those who pick it up as they go along.

Various Medical Specialties Are Recognized

The frequently repeated saying, that an army doctor is 5 percent physician or surgeon and 95 percent soldier, may be said to be 5 percent true and 95 percent untrue, under present conditions. There never before has been the general, consistent and persistent attempt to place every man where he will be the most efficient; as for example: A private who has had three operations performed on his appendix, including one for adhesions, and who is utterly unfitted for the infantry or artillery, has put in a request, not for discharge, but, to be permitted to serve as a "bammer," in which line he had had considerable experience in peacetime. Also, the work is congenial. The writer confesses that he had not the slightest idea what was meant by this supposedly new branch of military service until he discovered it to be that a contraction of "embalmer." A similar case, except that

there was only one prior appendix operation, is that of a man who was destined to serve in the shoe branch of the quartermaster's department.

There seems to be but little tendency to be supercilious toward "safe" lines of duty—the only question is, whether a man will do something useful and not shirk. In the medical corps, the same idea of putting every man where he would be of the most value has been followed out by recognizing, to a degree never before carried out, specialties and particularly the cleavage between medical and surgical practice. Just before we became engaged in war, the writer was one of the few who advocated, rather timidly, a recognition of internists and laboratory-workers as members of the army medical corps, without even the pretense of their being surgeons, although, probably, these feeble suggestions had nothing to do with the prompt and radical manner in which the same idea was promulgated by the Surgeon-General.

There is no established specialty that is not, at present, officially recognized in the medical department of the army, albeit, of course, the numeric distribution of cases is far different from that in civil practice. The necessity of caring for the civilian population of a country invaded does not even except the specialties of obstetrics and gynecology.

Some of the Difficulties, Actual and Potential

It has been found necessary, however, to simplify the first rough draft of a highly specialized medical service by making a primary classification of surgery, internal medicine, and laboratory-work, and it is possible that this may result in some friction. Thus, one accepted as a specialist, while having a fairly good working-conception of the importance of himself and his specialty, is, necessarily, subordinated to one who in civil practice would be on the same professional level. If, under this grouping of specialties, a tendency to maintain subordinate rank is carried out into practice, an injustice will be done, with the natural compensatory tendency—itsself contrary to the highest efficiency—that the various specialists will try to qualify for the more general domains of the three principal divisions of the service. Moreover, certain specialties that combine medical and surgical practice or which must be carried on in private life in conjunction

with laboratory-work, naturally invade the provinces of other men.

Whether these potential difficulties can be avoided merely by mutual forbearance and the spirit of friendly cooperation in ministrations—which is almost a shock to one suddenly removed from the jealousies of civil practice, which unfortunately remain to some degree, though far less than formerly—is a question for the future. It may be that a more or less complete return to a multiplicity of recognized subdivisions of the medical corps will be necessary or that promotion and availability for executive positions must be made irrespective of specialization. However, even so, another problem presents itself.

In the regular army, promotion beyond the first few grades, whether in the medical corps or in others, or in branches of the line, almost inevitably involves confinement to executive duties and a renunciation of special skill, at least so far as its practical manifestations are concerned. As an illustration, the writer thinks of his commanding officer as the Colonel, forgetting the M. D., goes to him for fatherly advice as to all sorts of military and organization problems,

but, scarcely would speak to him about a matter of strictly professional interest; yet, not only does this attitude do an injustice to the man's professional ability, but, so rapidly have promotions occurred in the last year that it certainly can not be more than a few years since the Colonel was actually engaged in caring for sick soldiers.

Now, the medical reserve officer is distinctly a practitioner, expecting, as to the great majority of them, to return to private practice and professional interests within a few years, possibly even not many months. Aside from patriotic motives, he has joined the army largely for the sake of acquiring more professional experience. Any ambition as to rank or executive power is combined with the desire to remain at least 90 percent physician. There is no particular reason why an oculist should not be the executive chief of the general surgical division or the milk-analyst of that of the laboratory division; so, to do full justice to the individual or to allow him to do full justice to the service, the instinctive tendency to raise (?) a man from his strictly professional duties, as he gains in rank, must be checked.

Reeducating the War Cripples

By B. SHERWOOD-DUNN, M. D., Paris, France

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WHEN one sees, as I have seen, or reads of the barbarities invented and practiced in this war, it would seem, almost, that our boasted advance in civilization is a horrible sham and the christianizing of the nations a mockery; and, were we to draw conclusions from a contemplation of the war alone, we might well despair. However, when we survey the multitudinous works of benevolence inaugurated and carried on by the neutral nations and civil inhabitants of the countries at war, we behold a goodness of heart and devotion to a christian ideal that put to shame the advocates of "might against right" and give ample proof that, at heart, the civilization of the world is not a failure.

None of the philanthropies, except the care and bringing up of the orphans of the war, has a more useful outlook than the

schools for the reeducating of those crippled by their injuries. Many a soldier would be in despair, when looking into an almost hopeless future, in the thought that his lost limb is unfitting him for the work of the occupation to which he had been trained, were it not for the assurance that he could, free of all cost, learn to reenter his former employment or a new and possibly more lucrative one, one adapted to the change wrought in his physical equipment.

Like most good works, this idea grew from small beginnings and unorganized conditions; but, now there are regularly organized schools of training all over France, adapted to the development of what at first sight would appear to be hopeless cases, and it is not difficult to imagine the extent of mental relief and depth of gratitude of the soldier who has his future thus changed

from one of helpless dependence to one of self-reliance and the dignity of self-support.

In the endeavor to conserve the limbs—which is the watchword of surgery in this war—a victim oftentimes has his injured member confined for months, only to find that he has completely lost the use of it when at last the bandaging is removed; and such a one must have the care of experts, to bring the affected member again to a state of usefulness. This work of reeducation naturally has divided itself into two departments: first, that of developing to the fullest degree the man's physical equipment; second, that of schooling this equipment to the best uses for his future usefulness and profit to himself, and, thereby, to the nation.

As a type of the first class of work, I will briefly call attention to the school of physio- and mechanotherapy originally established at Trouville, but, later transferred to Caen. This school was organized in February, 1916, and the course of instruction and the means employed would seem much more highly calculated to attract the crippled soldier and accomplish the desired results than would the purely medical treatment and the routine of mechano- and electro-therapeutic treatment which were at first adopted for the accomplishment of the same purpose.

How These Cripples' Health Is Built Up

Organized at the most fashionable seaside resort in France, the advantages of the sun- and sand-baths were added to the open-air exercises and went far to restore the vital energy. The exercises are all in the open air, in the form of gymnastics, calisthenics, games, and sports suited to the requirements of the hydro-, electro- and mechanotherapy as indicated, and have achieved splendid results to the several thousand who have been sent to this establishment since it was opened.

The men first are divided into two classes—those having suffered wounds or loss of lower limbs.

A large field is fitted up with frames from which are suspended the different apparatus; trapeze, giant swing, cords, rope ladder, and so on. Flat running and springboard jump; an obstacle-race course; a pole erected with a cord with a tennis-ball attached, played with a racket and called "spirobole"; tenpin-alley; vault-

ing with the pole; disc-throwing; dumb-bells; wood and metal parallel bars; easy baseball and pitching quoits; match-play at "boules"; lifting-machines; tug of war; and the lever used in the trenches for bomb-throwing. At intervals, there are class- and individual contests, with prizes. Thus one can readily understand with what gusto and pleasure these men enter into this varied and agreeable training.

Those in classes one and two take daily walks, on the beach, of from two to eight kilometers; and all of the work—for work it is—follows a fixed plan and apportionment of hours, whereby one class with its instructor follows another. Every effort is directed to the amplitude of movements, with particular attention to the reestablishment of the functional activity and usefulness of the afflicted members, and it is surprising with what rapidity they improve physically and in moral stamina.

In July and August, sea bathing and swimming are added. These, though, are of short duration, never exceeding ten minutes, and preceded by examination and taking of precautions against contraindications.

At regular intervals, the men are subjected to measurements and tests as to progressive gain, respectively, in the affected articulations, increase in volume and tonicity of muscles, chest measure, arterial pressure, strength of sight and hearing, and functional activity.

In the daily walking and class exercises, the work is progressively increased and varied, so as to preclude monotony and maintain and increase the interest. There is a climbing-exercise, which has proven extremely useful for both classes, and it is the ambition of those crippled either in arms or legs to achieve success in this particular respect.

In the jumping-exercises, care is taken to apportion the character, length, or height of the jump to the degree of disablement of each individual. In the practice of throwing the ball, use is made of the trench hand-grenade weighing 7 kilograms. The performances of each man are daily noted by the subofficer, chief of the section, so that the men themselves can note their progress and strive to improve it.

Lessons in fencing with sticks and in boxing are given to selected classes, exercises in respiration taking place between each task,

and the close of the day's field-work is marked by a chorus song.

Emulation is self-inspired, while the *esprit de corps* is kept at a high level by small prizes and greater freedom in leave of absence from the barracks. A fête is organized during the summer, to which the public is admitted; and the competitions and prizes increase the enthusiasm and elevate the general morale.

For the summer of 1916, out of 1500 men received, 56 percent were returned to serv-



Fig. 1. Tinsmiths.

ice in the army, 75 percent of these returning to active service and 25 percent to the auxiliary service. Not a single accident of a grave character occurred from either the exercises or the surf-bathing, and the excellent results thus secured have shown the value of similar work for school children



Fig. 2. Stenographers.

during the summer months of vacation, to develop them into the best form of maturity.

Some of Agencies in This Work

To the Americans belongs the credit for the initiation of the movement to reeducate the disabled soldiers, which resulted in the formation of the "Union des Colonies Etrangères en France."

The first and most important school organized is found in the Grand Palais on the Champs Elysées, where are installed,

with experienced instructors, departments for teaching shoemaking, tinsmithing (Fig. 1), carpentering, cabinet-making, stenography (Fig. 2), hairdressing, harness-making, tailoring, electricity, mechanical repairing, wood polishing, and numerous other trades. In the category with stenography (Fig. 2), are included bookkeeping, designing, and a course in English and other languages (Fig. 3). They have opened another school, beautifully situated facing the river Seine; and there also is one in the suburbs. The committee has an employment bureau through which it finds suitable situations for the graduated pupils. All of the soldier students are paid, from the beginning of their work, a minimum of ten cents per hour, besides being lodged and fed, and their remunera-



Fig. 3. The men in the front row are blind.

tion is increased in measure as they increase in efficiency and productiveness.

The work of the foreign colonies was at once supplemented by prominent French philanthropists, who formed an association called the "Fédération Nationale d' Assistance aux Mutilés" (cripples), which has established twenty-four branches, distributed all over France. This Federation maintains ten different schools in Paris, besides finding appointments in the different trades and businesses, where men are taught while at the same time receiving seventy cents per day for their labor, increased as they advance in their work; this, with thirty-five cents per day received from the Government, permits them to live with their families at home. At the close of their instruction, the Committee undertakes to find them suitable situations, and under certain conditions advances a sum necessary to equip and start a given man in business. The men are assured of the

continued interest of the Committee, and are told to apply to it for aid when in need.

They have also established several night-schools for those who, by reason of daily occupation, can pursue only a course of evening study. Several expositions have been held of the work of these men, as also of the blind, and these have called forth universal commendation.

The Psychologic Element

There is an important element of psychology attached to the treatment of these patients, one that is of primary importance, and all those coming into contact with them must give it due consideration. The men, after long months of hospital treatment, oftentimes extremely painful, the greater part of the time left to themselves, despite the fact that in a bed on each side of them there rests a comrade, grow morbid over their disability and the apparent hopelessness of their convalescence, become discouraged, and fall into a low condition of morale.

Those who come into contact with them as teachers, attendants or visitors are strictly enjoined not to deplore their all-too apparent misfortune, nor to sympathize with them, but, rather, to make light of their troubles, laugh at their fears, and encourage them with the hopefulness of their outlook, if only they will apply themselves diligently and with determination to the acquiring of proficiency in their new occupation; and, in order to aid and abet the reestablishment of their courage and self-confidence, one or two very badly crippled men who have achieved more than ordinary efficiency in the profession they have adopted, are kept in the school as helpers—a daily living example of what anyone can hope to become. There is no greater factor to aid the work of reeducation than the will of the subject to succeed.

Choice of Occupation

In the choice of occupation, certain fundamentals must be taken into consideration.

First, the former occupation. If the man was, for instance, a cabinet-maker, he has become accustomed to certain principles and routine that are a part of his mental makeup, as, for instance, the choice of a certain piece of wood with a certain grain, its age, color, character and quality,

which by long practice he has learned to judge by touch and appearance to the eye and by which he knows how and with what tools he can best work it. Into his work, all his organs of sense, his whole being enters more or less without his realizing it; his memory, his sensations are so intimately associated with his past experience that they instantly appreciate and automatically correct faults and defects. It is a *chef-d'œuvre* of coordination, which, following the law of habit, has arrived at great perfection without effort or fatigue. His experience has taught him the value of the work he accomplishes, its qualities of excellence or defects, its market price, and what profit he can expect from his time and labor.

This pertains to all expert labor, and it is an incalculable loss to this particular man to have to enter a wholly new and unknown field, to acquire new habits, new knowledge, and expertness in both. There is in this man's head a fund of expert knowledge and experience that has been acquired laboriously, slowly, and oftentimes without consciousness on his part, and which, at the moment of matriculating in the school, he often is ready to sacrifice with a light heart for some new profession apparently promising lighter work and more remunerative return; it is here that the intelligence of the school direction must be unceasingly exercised to conserve to the fullest extent possible the capital already possessed by the new pupil and gently persuade him into the lines to which he probably is best fitted.

Second, his future environment. If, by the combination of mechanical aids with which he can be provided and taught to utilize, the man can return to his former occupation or any department of it, he can, in all probability, do best in the neighborhood whence he came. If, however, he must take up a new occupation, then its choice must be related to the size and location of his native village, to make sure that by the exercise of his new profession he can there earn a living. Oftentimes, different departments of work can be combined to insure sufficient occupation, as, for instance, a shoemaker can combine harness-making.

Third, mechanical aids. Several simple and generally useful appliances have been devised to replace in usefulness the lost

arm or leg. Figure 4 shows an attachment for a one-armed agriculturist, to replace a lost arm; and this lends itself to a diversity of employment. A leg-attachment by and of which a harness-maker can continue his work, and a simple arrangement by which a bootmaker who has lost both legs can continue his work, also have been invented and are very useful.

Help for the Blind

There are special schools for the blind. Because of the new form of trench warfare, there is a large percentage of head wounds, and thus a greater number of

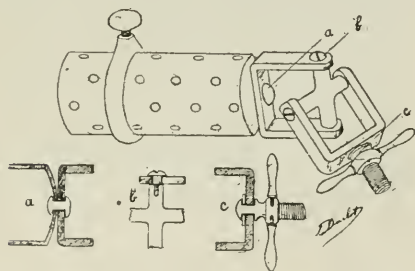


Fig. 4. Attachment for stump of arm.

blinded men than in any previous war. These men are detained in the schools the shortest time possible, for the reason that, having to learn everything anew by touch and by the ear, they are better off and the gainers by being with their families and among their friends, where their future plan of work must be formed and their life and movement accustomed to their habitual surroundings.

Of those who come from farms, one-half return to resume the same work, and it is surprising what number and amount of things they can reaccustom themselves to do—cleaning and stabling horses, milking the cows, hoeing, harvesting all the ground-vegetables, spading, gathering fruits, plaiting bands, hand-threshing, sawing wood, repairing harness, et cetera. In many instances, they can supplement this work by soling shoes, making brooms and brushes, recaning chairs, thereby adding considerably to their earnings. Besides these they are taught carpet-weaving, barrel-making, basket-making, mat-weaving, and those possessing the education and aptitude may take up such occupations as massage and piano-tuning, which are very remunerative.

One of the favorite occupations, and among the most remunerative ones, is brush-making. The tools necessary are simple, the work rapidly done, and the product salable at a good price. If the man can have his workbench by a window looking on the street, the passersby, seeing his work and his condition, will the more readily become purchasers and constant patrons.

By an ingenious attachment to the ordinary typewriter, it has become possible for the blind to employ this machine, and it is surprising how adept they become. Where the blind depart from the field of manual labor, it becomes a necessity for them to learn the use of the Braille system of reading and writing.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichualco, Mexico

[Continued from January issue, page 50]

TWO weeks after this episode, that same carriage again appeared, with an urgent request that I go along and bring my emergency case, for serious work awaited me. The patient, I found, was the manager of the plantation, who had been severely torn by the horns of an angry bull, which required some delicate surgical work. I managed to get him back into proper shape, though, and then stayed with him in his

room most of the time till the next day in the afternoon, never sleeping a moment and not going to the table to eat. The condition of the man was so critical and the danger of collapse so imminent. However, my meals came to me in tempting shape, and every three hours through the night my mug of coffee and milk came to the room steaming hot. The servant girl who brought the meals and coffee confided in me that all had been prepared by the delicate white hands of the fairy queen of the

house, who had remained awake in the kitchen all night, in order that I might not miss my coffee to the minute.

When ready, I returned to my office without having met the young lady or the rest of the family, not even entering the dining-room or parlor, for I was bloody as a peon who had been well slashed with a machete, while I had no change of clothing with me to make myself presentable.

Quo Vadis?

I passed an unquiet week. I was satisfied that the young Aurora of the mountain-vale might become the morning-star of my gloomy, solitary life. There I might live in tranquil luxury, the physician of the circumjacent country, with a companion worthy to wear a royal diadem. From that inviting felicity, I looked away down into the jungle and marshes through which my thorny pathway of destiny was blazed out. The contrast was startling. Had my sins been sufficient to merit such abiding sacrifice? I felt not. So, finally, I resolved to go uninvited to the plantation on the Sunday and propose to the girl.

Sunday morning came and I had everything arranged to go. There had been on my desk for a long time some fragments of Latin poems, tumb'ed about at random. The little volume lay open upon the table, as it was likely to at any time, unheeded. Somehow my eye fell on the top of a page of dialogue: "QUO VADIS?" in capitals. I did not seek the reply. The convulsion of other occasions seized me. I abandoned my visit within an hour to move some thirty miles farther away from the plantation, deeper into the jungle and marshes.

Strange, what little straws will change the current of a life. A long time afterward, I met by chance the woman and her husband, and then told her how near I came to seeking her hand, and she confessed that she would have accepted me at the drop of a hat—and would have dropped it herself; that her father was anxious to see such a match, because I had no vices and would be useful to the neighborhood. As for herself, she believed that it would be impossible for her to attract my affections.

I could not break the binding spell of magnetism that held me to the destiny of my present enthrallment. Twice since then I have seriously contemplated a modification by taking a companion, while not, though, abandoning aught of the work I

was doing; indeed, I went so far as to decide upon some young woman of my acquaintance who, at the time, I thought would make one a desirable life-companion. However, neither time did I say a word to them, for always some masterful reluctance intervened to prevent me from proposing.

Contentment Even in a Lonely Life

But that divine Aurora of the mountain-splendor haunted me ever, haunts me to this day and moment. The magic of those soft, sweet, black eyes beaming on me and the thrill of her enthralling smile were deeply penetrating influences never to be forgotten. And yet, there were influences cutting still deeper into the fiber of my whole being—need I name them, the memories of my ancestral home and the grave of my Carrie? I do not believe I ever could have been happy had I married the girl whom I was unworthy to have possessed as my wife.

As for happiness, save for rapturous moments too swiftly fleeting and too fierce to last, I regard that as an uncertain meteor, that we blindly pursue but never fully grasp. When happiness seems brightest and most ecstatic, always, it seems, a lowering cloud of sorrow suddenly eclipses its splendor.

Possibly I am actually as happy in this desolation as some of you, my confrères, whose lot is far more enviable than is mine. I have seen what I possess here growing into symmetrical form under the touch of my own hands, and I saw grow up around me, from infancy, the generation of the present day, the little tots losing their terror of the doctor and becoming chummy with him. And thus, day by day, and year in and year out, these little ones greeted me as I passed the street, till, ere they knew it, they had become young men and young women, the girls ever jesting with me, as was their custom when they still were children. And, really, I might be more miserable than I am. Once, when I was preparing to leave this place, never to return, these people gathered round about me, with tears streaming down their dusky cheeks, and implored me not to go away, for they surely would die if I left them thus. So, also, while the anti-American sentiment was at white heat, immediately after Vera Cruz, these Mexicans, these lowly peons, gathered in front of my house, stopped me on the street, called to me from their homes, as I passed, that they would give their lives to

defend me from those who were swearing vengeance against those hated *Americanos*, should any attempt to harm a hair on my gray head.

And it is something, in the presence of such a dearth of hope, to have the heartfelt gratitude of even the poor and miserable and to realize that such hapless people regard one as their protector, upon whom they depend to defend them against the ravages and havoc of malign disease. I would rather be the physician of these poor, hopeless creatures, than the one of the select four hundred who may be able to revel in the luxuries that plethoric wealth can buy, but, yet, be strangers to the balmy sleep that is mine when in my house and with no desperate patient to worry about.

The Curse of Pursuing Memories

While I attend to my practice and do not take mental excursions in other, more pleasing pathways, I enjoy a reasonable modicum of tranquility. But that blight of life, the demon thought, that intrudes unbidden and calls up to memory the wrecks of the past—the dead!—and envelops one with goblin spectres of small transgressions and monster crimes; bringing one, as it were, before a star-chamber inquisition, wringing in torturing reluctance self-condemnation, from a conscience perchance less guilty than cowardly. But this is life—the nightmare of protesting existence—the sick life of earth that we all are living. You, my brethren, in your wide-awake hours, may, and you do, dream Elysian-fields' dreams of hopeful happiness and open your eager arms to clasp the fond delusion. A phantom shadow mocks just beyond the reach and lures you on, and you still, hopefully, pursue.

And that ever retiring, unreachd hope, that is the vitalizing elixir of life. Hope deferred is the bane but also the salvation of man, on earth, that sustains an equilibrium, to prevent one-half of the wretched world from plunging into rabid madness in

moments of sheer despair. Just beyond the murky desolation there flickers a tiny glint of a dim beacon-light of hope, to buoy up the sinking spirit to strive onward.

With me, it is no more a faint ray of hope low down the somber horizon that cheers me to battle with the remorseless surge that buffets me so hard, but it is almost a mania—an intense curiosity, or yearning, or what you will—to pry a little deeper into the storehouse of Fate and see what new wonder may body forth to surprise or to afflict me. Each dawning day is a new medley of scenes or experiences, in many features unlike any other day ever met before.

Now, as the shadows of evening begin to blend with the sable wings of night and I hear "her trailing garments sweep through her marble halls," a sigh of bittersweet meditation involuntarily heaves my bosom as I turn to this thread of retrospective narration, in which I live over once more the painful happenings of some nook or haunt of the distressing past. "Strange that the delicious pleasures—the exquisite raptures of every-day life—mingle so rarely in my pathetic lot!" I often unconsciously exclaim. And the few bright and shady oases and bubbling fountains have been blighted and marred by something disappointing or painful. The only feature that is brilliant, without cloud-shadows of anything mundane, is that little round table in that dining-room in Paris, at the dinner hour, with a heavenly angel in disguise seated opposite me. There, my memory can linger without reproach or shame. There, there never was look, sigh or thought that might not appear before the great and terrible Judge. But, alas! alas! what a formidable array of sensual or selfish debits darken against that pure credit, the unobtrusive influence of which restrained me from participating in the wicked excesses of Paris.

(To be Continued)



What Others are Doing

THE FATE OF HALAZONE IN THE ANIMAL BODY

In a paper written by Dunham and Dakin and appearing in *The British Medical Journal* for December 15 last (p. 790), a study is made of halazone (parasulphondichloraminobenzoic acid), the synthetic introduced by Dakin for sterilizing drinking-water. Not only is halazone effective for the purpose named, but, according to these investigations, it seems to be virtually devoid of toxicity. It appears that Dunham and Dakin have fed rabbits for many weeks with doses varying from 100 to 200 milligrams per day without observable symptoms resulting, while repeated doses of 500 milligrams also were without effect. Since the quantity of halazone required for sterilizing one quart of water is only 4 milligrams, the substance may be regarded as completely innocuous.

The urine of rabbits that had received halazone having been collected, acidified, and extracted with ether, crystalline parasulphonamidobenzoic acid was deposited. It is probable, therefore, that halazone is converted into this substance, with the loss of 2 atoms of chlorine in the animal body. The tablets of halazone possess excellent keeping qualities, provided they have been properly made, the sodium carbonate or borax are pure and thoroughly dried, and the tablets are preserved in amber-colored bottles or other light-excluding airtight receptacles.

The deductions drawn from the authors' experiments are as follows:

1. Halazone itself appears to be indefinitely stable at room temperature, while at 50° C. not more than 1 percent decomposition was noted in sixty days.

2. Halazone (5-percent) mixed either with dry borax or dry sodium chloride (95-percent) is stable at room temperature, but, at 50° C. suffers about 20 percent decomposition in sixty days.

3. Tablets containing halazone (0.004 Gram), dry borax (0.008 Gram), and so-

dium chloride (0.088 Gram) usually showed less than 2 percent and never more than 7 percent decomposition in 150 days at room temperature (15° to 32° C.); and equally good results were obtained with similar tablets containing dry sodium carbonate (0.004 Gram) in place of borax, while tablets containing sodium bicarbonate (0.004 Gram) showed 7 percent decomposition. For practical purposes, they may be regarded as stable at these temperatures.

At higher temperatures, the rate of decomposition was most rapid with the bicarbonate tablets; namely, 76 percent decomposition in 115 days at 40° C. The tablets with borax showed 35 to 48 percent decomposition in 115 days at 40° C. and 33 to 34 percent decomposition in 60 days at 50° C. The tablets with sodium carbonate showed 48 percent decomposition in 95 days at 40° C.

The practical conclusions drawn from these results are as follows: Halazone tablets prepared from thoroughly dry materials, using sodium chloride with either borax or sodium carbonate, and preserved in amber bottles, will maintain their germicidal efficiency at temperatures up to 32° C. almost unchanged for five months, and should be serviceable for considerably more than a year. Prolonged exposure to temperatures constantly maintained as high as 40° to 50° C. will reduce their efficiency by about one-half in three months.

BLADDER SYMPTOM IN FEMALES

The fact that bladder symptoms in the female may be present when the bladder itself is normal, while the sexual organs are diseased, necessitates a careful interpretation of conditions, among which are those of patients who complain of frequent micturition immediately followed by burning pain and tenesmus, and similar symptoms denoting cystitis. W. T. Dodge (*Jour. Mich. State Med. Soc.*, July, 1917,) points out the necessity of tracing these symptoms

to their ultimate causes, in order to be able to institute successful treatment.

The causes may be any of the following conditions: Infection of any portion of the urinary tract; disease or displacement of the uterus or its appendages; irritable caruncle of the urethra; newgrowths in the bladder; stone in the bladder. In addition, these symptoms often are simulated in diabetes and in hysteria.

The first procedure after obtaining the history in such a case is, to secure a specimen of urine with the catheter and subject it to a microscopical examination. The presence of pus denotes urinary infection; its absence at least demonstrates that cystitis is not present. Error sometimes occurs from dependence upon a voided specimen of urine, as that frequently is contaminated with vaginal discharge. If the urine is free from pus, there is a presumption that the bladder symptoms are caused by disease of the pelvic organs. Very distressing bladder symptoms may be observed when endometritis, uterine displacement, uterine tumor, ovarian tumor, or some such condition is present.

It may happen that very severe symptoms, especially of tenesmus, and frequent micturition occur, although there is no disease of the bladder or other pelvic organs. In these cases, the urine is intensely acid, and it should be suspected that there is an infection of the pelvis of one kidney, with temporary or permanent blocking of the urethra. When the symptoms and the appearance of the pus are intermittent, it is reasonable to suspect infections localized in one kidney. This may be determined by obtaining cultures from the urine obtained by ureteral catheterization. With this aid, many cases may be restored to normal by appropriate local treatment, supported by the use of autogenous bacterin.

When a case proves obstinate to ordinary treatment, further investigation is called for with the cystoscope and ureteral catheter. This examination is facilitated by the administration of methylene-blue.

In cystoscopic examinations, care should be taken not to assume that one kidney is not functioning because the fluid is not seen escaping during the period of observation. Sometimes considerable time is required before the flow appears through a ureteral

catheter, even when the kidney is in fairly good condition. It goes without saying that in the event of a cystoscopic examination, and especially if one kidney is suspected of being diseased, the urine from each kidney should be drawn separately, by ureteral catheterization, for laboratory examination.

The author points out, incidentally, that irrigation of the pelvis of the kidney while the catheter is in place is a very valuable therapeutic procedure in all cases of pyelitis due to ordinary pus-producing organisms.

BLADDER TROUBLES AMONG SOLDIERS

Among soldiers in the field, according to B. Lipschultz (*Wien. Klin. Woch.*), there not infrequently are encountered cases of bladder weakness, which he designates as enuresis diurna et nocturna adolescentium—in distinction from the true enuresis nocturna.

The trouble consists in constant need to micturate, polikasiuria, dripping, incontinence, these symptoms following upon one another in the order indicated, and which often lead to a diagnosis of bladder inflammation. This condition is a result of prolonged exposure to wet more often than of catching cold.

The course of the trouble is somewhat tedious and not readily amenable to treatment, disappearing or being greatly relieved within from two to eight weeks; and then the tendency to relapses is pronounced. Heat, in the form of sitz-baths, fomentations, with rest in bed, has proved the best treatment.

COPPER ARSENITE IN TYPHOID FEVER

In a paper on the treatment of typhoid fever, that was published in *The New Orleans Medical and Surgical Journal* for 1903, Dr. Lucien F. Solomon laid particular stress upon intestinal rest and the prescribing of copper arsenite as being the cardinal principles in controlling this disease. In the same journal—the December, 1917, issue—Doctor Solomon reverts to his earlier recommendations, reporting that he has treated 186 cases, without one death, and without a case of tympanites, hemor-

rhage or any kind of complication occurring. In every case, within seventy-two hours after beginning treatment, the temperature began to decline and defervescence gradually took place, until normal was reached at about the twelfth day.

The author looks upon typhoid fever as a twofold injury to the organism; namely: a generalized sepsis or toxemia and a local traumatism in the intestinal canal; that is, the always present inflammation of Peyer's patches; the latter always being the source of complications in the form of ulceration, diarrhea, and hemorrhage.

The author, from a large experience during many years, is convinced that in copper arsenite we possess an agent that effectually combats the combined conditions just mentioned.

According to the author, the treatment of typhoid fever, if seen early, should be inaugurated by cleaning out the intestinal canal by means of a brisk saline purgative. This is followed by the administration of copper arsenite, 1-100 to 1-50 grain every three hours. A saline enema is administered daily. The best diet is, food readily assimilable and in liquid form.

The action of the copper arsenite is a twofold one. It is a powerful germicide and antiseptic. However, it not only directly destroys the toxins generated by the typhoid-bacillus, but, it also exerts a direct local action upon the inflamed acuminate glands.

The author properly insists upon the necessity of employing the pure salt of the arsenite of copper. He also states that the powder is to be administered suspended in distilled water.

With rare exceptions, the author has found the effects of the treatment to become manifest, within seventy-two hours, by a decided drop in temperature, this resulting in a normal curve on about the twelfth day. This decline is gradual and may be followed by a subnormal morning temperature for a few days, which is best corrected by means of caffeine.

In addition to this treatment, it is, of course, necessary to pay suitable attention to the proper management of each individual case. In the first place, the author recommends daily flushings of the colon with a saline enema, condemning purga-

tives given by mouth. Antipyretics are to be withheld absolutely, because, in the author's opinion, they always are depressing and do more harm than good. Excessive temperature rises are reduced, better, by sponging with tepid water and alcohol. An ice-cap may be applied to the head—it should not be brought in contact with the abdomen. For cardiac stimulation, the author recommends digitalis. He objects to strychnine, although this may be given for its general tonic effect in the later stages or during convalescence.

Since intestinal rest is one of the important conditions of success, the diet should be of such a nature that the least amount of food residue is allowed to pass over and irritate an already inflamed surface. In the author's practice, the diet is confined exclusively to the following: liquid peptonoids (1 ounce every two hours), containing protein, lactose, dextrin, and cane-sugar, each ounce of which equals 62.1 calories; the white of three or four eggs daily, given in orange-juice, grape-juice, if agreeable to the patient, and water, preferably carbonated, *ad libitum*. He sometimes varies this with panopepton, or else Hart's alimentary elixir, if more agreeable to the patient. The patient thus gets food in twenty-four hours of a caloric value of about 1000, which is amply sustaining.

In a discussion of this very interesting paper, Dr. Joseph Holt emphasizes that intestinal antiseptics is the secret of success in typhoid fever. This, of course, is in full agreement with the position that CLINICAL MEDICINE has maintained for many years; as it has also advocated the employment of copper salts, notably the arsenite and, more recently, the sulphocarbolate. It should hardly require mention, yet, it may be wise to point out that copper salts always should be given in solution, in order to prevent irritation of the mucous membrane, which is sure to follow the ingestion of the concentrated substance in the form of tablets, pills, granules, cachets, capsules, or powders.

ACUTE NEPHRITIS SECONDARY TO FOCAL INFECTION

In an interesting article published in *Colorado Medicine* for December last, Dr.

C. B. Van Zant, writing on focal infections, asserts that the relation of infectious nose, throat, ear, and sinus diseases to nephritis has received much more accurate description and greater emphasis in the writings of specialists than in those of internists, and he points out that the causal relation of the primary focus of infection to the occurrence of nephritis often is entirely overlooked. Moreover, the form of nephritis resulting secondarily to focal infection usually is distinctly different from the common type in its histology, pathology, natural history, and prognosis. And, lastly, the treatment to be instituted for this variety of nephritis naturally must be vitally connected with the cause.

It is a well-recognized fact that the primary focus of infection for nephritis of bacterial origin very often is in the tonsils; it is not so fully realized, though, that infection of the posterior nares, the accessory nasal sinuses, middle ear, and the heart-valves likewise may be of essential importance. From these primary lesions, the secondary infection of the kidneys is brought about, of course, by way of the circulation.

It is believed by most investigators that the bacteria ensconced in the primary focus there multiply, are absorbed, and thus are carried to the kidneys, where they plug to a variable degree the glomerular capillaries. The bacteria, being nonpyogenic, induce a nonsuppurative type of nephritis. Whether, in addition to bacterial emboli, toxins absorbed from the primary focus of infection play a part in the production of the nephritis is as yet a moot question.

The bacteria thus reaching the kidneys are of certain strains that seem to have a predilection for these organs, in accordance with Rosenow's well-proved law of selection. There are present, almost invariably, streptococci, and these usually of the viridans class and often appearing as diplostreptococci. However, cases have been observed in which the infection was one of the typhoid- or colon-bacillus or of other bacteria.

The crowding of cases in certain communities suggests the endemic presence, from time to time, of some streptococcus possessing a special affinity for the tonsils, and secondarily for the kidneys. Inci-

dentally, it has been suggested that some of the cases of so-called trench-nephritis may have a similar bacterial, probably streptococcal, origin, with the tonsils as the inlet of infection.

Since some of the cases of acute nephritis occurring in that large group of erythematous and purpuric diseases are ushered in by tonsillitis, the author raises the interesting question as to the kidney lesion in these cases possibly being directly secondary to the tonsillar infection. Nor is it unlikely that many cases of so-called idiopathic acute nephritis, or nephritis from "cold", may have an overlooked tonsillar origin.

As to the clinical features of this form of acute nephritis, the outstanding and most striking symptom is, hematuria, which, while possibly delayed in appearance, is pronounced in degree, prolonged in its presence, and disproportionate to the other urinary findings. The blood in the urine in many cases is so abundant as to be evident to the eye for weeks, and microscopically thereafter; while in a smaller number of cases it is microscopic throughout and prone to variations in amount from day to day. In addition to this, there are associated the usual urinary findings of acute nephritis, albumin, and casts; also oliguria; edema (usually moderate and limited to the face and feet); fever (slight or absent); headache; vomiting (often explosive and unrelated to the taking of food); and marked secondary anemia. Uremic symptoms may not be in evidence till late in the case.

This form of acute nephritis follows only after a considerable interval, ordinarily from one to two weeks after the development of the tonsillitis. This is in distinction from the acute nephritis secondary to scarlatinal or diphtheritic infection, where evidences of nephritis often are concomitant with the presence and height of the tonsillitis, the urine being suppressed early, dropsy extreme and general, hematuria less prolonged, uremia common and early, fever prompt and marked.

The prognosis of this form of nephritis appears to be good, recovery having been observed to take place in from three weeks to four months. In most of the cases reported with a favorable outcome, an early

or fairly early removal of the primary lesion had been instituted. The importance of this early removal of the primary seat of the trouble is insisted upon by most authors.

The conclusions of the author's studies are as follows: (1) Acute nephritis is not uncommon following primary infections of the tonsils, nasopharynx, accessory nasal sinuses, and the middle ear. (2) The type of kidney lesion is a glomerulonephritis. (3) Clinically, it is characterized by its late development after the primary disease and by protracted and severe hematuria. (4) Removal of the primary focus of infection is a prime necessity. (5) By such removal, coupled with the usual medical measures, the outlook is rendered decidedly encouraging.

DENTAL ABSCESS OR INFECTION AND ITS CONSEQUENCES

Dr. Judson Dorland, writing in *The Dental Cosmos* for November last, on the subject mentioned in the title, presents the following conclusions:

Focal infection, dental or oral in origin, may cause slight, serious or fatal disease of almost any tissue or organ in the body, more commonly affecting joints, bones, muscles, blood, heart, vessels, kidneys, and nerves. Secondary infection may be aggravated by tonsillar disease when these glands are infected by mouth. While acute periapical infection or abscess usually is diagnosed, chronic latent periapical infection or abscess usually escapes diagnosis, owing to carelessness or ignorance on the part of physician, dentist or patient.

Many dentists hold the erroneous opinion that periapical infection or abscess produces no systemic disease when there is no pain, and, moreover, they decline to treat radically periapical abscess or infection, because a latent infection might be converted into an acute process; failing to recognize the greater danger from the continuance of a systemic disease if a latent septic focus is allowed to remain.

The falsity of the prevalent belief in non-interference with latent dental septic foci, embodied in the injunction to "let sleeping dogs lie," should be deeply implanted in the mind of every practitioner of medicine and of dentistry. When a dentist discovers

dental septic foci or pyorrhea, he should advise his patient to consult his physician.

When a physician discovers serious disease of an important or vital organ or tissue, such as the joints, muscles, heart, kidney or nervous system, the dentist should cooperate, to determine whether the cause lies within the buccal cavity, and, in the absence of any other discoverable focus of infection, should assume that a suspected focus in the mouth is the cause of systemic disease, until the opposite is proved; recognizing that in doubtful cases it is wiser to sacrifice, occasionally, a tooth rather than to sacrifice health or life.

When a physician consults with a dentist regarding the etiologic relationship of the mouth-cavity to systemic disease, the dentist should give the physician the benefit of his expert advice, not solely from the mechanical, but, from the mechanical and biological point of view, with proper consideration of the medical evidence in the case.

Appreciation of the importance of removing oral sepsis that may be the cause of systemic disease necessitates that additional instruction be given to students and practitioners of dentistry, and clearly demonstrates that the practice of dentistry shall no longer be ninety percent mechanical, but, that a generous percentage of time be given to the consideration of the relationship of mouth sepsis to the systemic welfare of the patient.

The evils following devitalization of teeth, to secure improved mastication, are but dimly appreciated, and systemic infection from recession and suppuration of the gums, pyorrheal pockets, capped teeth, and artificial dentures have received little or no consideration. Serious systemic disease has followed oral sepsis caused by artificial dentures designed to improve mastication.

Despite earnest effort on the part of members of the medical and dental professions, the rank and file still remain apathetic to the vital importance of the prompt detection and removal of septic foci in the mouth. It is predicted that the future will demonstrate that the importance of a septic mouth as a cause of ill health or serious or fatal disease is far greater than is now believed.

The etiology, diagnosis, and treatment of septic foci in the mouth is essentially a problem belonging to the dental profession; it must be courageously attacked and solved,

and the added service to mankind will make dentistry one of the most important specialties in medicine.

An urgent need exists for additional early signs of periapical infection and systemic invasion. Lymphocytosis in the absence of leukocytosis is occasionally a sign of systemic invasion from a latent focus of infection.

The American dentist is recognized as the foremost in the world, largely through originality, invention, industry, ingenious mechanical devices, and dexterity. The same energy and intelligence directed toward diagnosis, prevention, and cure of oral sepsis will yield similar brilliant results.

WORMS AS A POSSIBLE CAUSE OF PNEUMONIA IN CHILDREN

Certain investigations on the life-history of *ascaris lumbricoides*, concerning which Capt. F. H. Stewart, of the Indian Medical service, reported in *The British Medical Journal* for 1916 (vol. II), stimulated similar studies in the Bureau of Animal Industry, U. S. Department of Agriculture, and the preliminary note on these investigations was published in *The Journal for Agricultural Research* (Nov. 19, 1917).

The important point, to the physician, is embodied in the following excerpt from this article:

The development of *ascaris lumbricoides* and closely related forms is direct, and no intermediate host is required. The eggs, when swallowed, hatch out in the alimentary tract; the embryos, however, do not at once settle down in the intestine, but, migrate to various other organs, including the liver, spleen and lungs.

Within a week, in the case of the *ascaris* affecting pigs, the migrating larvæ may be found in the lungs, and meanwhile have undergone considerable development and growth. From the lungs, the larvæ migrate up the trachea and into the esophagus by way of the pharynx; and this migration up the trachea may already become established in pigs as also in artificially infected rats and mice one week after the infection.

Upon reaching the alimentary tract a second time after their passage through the lungs, the larvæ, if in a suitable host, presumably settle down in the intestine and there complete their development to maturity; if in an unsuitable host, such as

rats and mice, they soon pass out of the body in the feces.

Heavy invasions of the lungs by the larvæ of *ascaris* produce a serious pneumonia, which frequently is fatal in rats and mice and apparently caused the death of a young pig one week after it had been fed with numerous *ascaris* eggs.

It is not improbable that ascarids frequently are responsible for lung troubles in children, pigs, and other animals. The fact, that the larvæ invade the lungs as well as other organs beyond the alimentary tract and can cause a serious or even fatal pneumonia, indicates that these parasites are endowed with greater capacity for harm than has heretofore been supposed.

Age is a highly important factor in determining susceptibility to infection with *ascaris*, while susceptibility to infection greatly decreases as the host animal becomes older. This, of course, is in harmony with the well-known fact that it is particularly children and young pigs among which infestation with *ascaris* is common, and that this intestinal parasite is relatively of rare occurrence in adult human beings and in old hogs.

OSTEOMALACIA, AND DISEASED PARATHYROIDAL GLANDS

After describing the various serious complications in a woman afflicted with osteomalacia, as also the anatomical lesions revealed at the eventual necropsy, P. Bull and F. Harbitz say (*Norsk Mag. f. Laegevidensk.*; cf. *Muench. Med. Woch.*) that among the latter a walnutsized tumor of strumous or adenomatous appearance in one of the parathyroidal glandules deserves of particular attention, inasmuch as similar tumors of these bodies have several times been observed in persons suffering from this malady.

The authors are convinced that some etiologic connection subsists between the two phenomena in question, notably, because the parathyroid glands undoubtedly are involved in the calcium metabolism of the organisms. Still, they do not conceal the fact that similar tumors of the parathyroidal bodies are not invariably associated with osteomalacia, and the pathogenesis of that disease remains as obscure as ever.

Miscellaneous Articles

Studies in Food Economics

X.—Cereals and Panification

IN the further consideration of vegetables as foods, we will now take up the subject of wheat.

With regard to flesh, we shall see that the statement of Haller is correct; viz.: "*Dimidium corporis gluten est*," that is, half our bodies are gluten. With gluten, we may include gelatin, for, these two substances are very much alike in their chemical composition, and when cooked serve the same purpose in nutrition.

Wheat and its Gluten.—In the composition of the kernel of wheat, we find the same kind of material as in animal flesh: First, we have gluten and albumin, both nitrogenous substances, and in which are located the mineral elements. Second, we have the carbohydrates, starches and sugars; and, next, the hydrocarbons, represented by the oils.

The wheat grain and various other seeds can be eaten raw, but, are much to be preferred cooked, in which condition they are more easy of digestion. The whole grain of wheat, as a food of economic value, is not superior to the oat, corn, barley, rice, and other grains. However, it has greater importance as a food, owing to the quality called panification (or breadrising quality) it possesses; this residing almost exclusively in the gluten of wheat and but to a very limited extent in the gluten of other grains. As this subject of panification is of great importance, we will devote some space to its consideration.

Panification.—It will be observed that, when wheaten flour is mixed with water to the consistency of a stiff paste or dough, a small quantity of yeast being added in the mixing, and this paste is allowed to stand some hours at a moderate temperature, the mass is perceived to increase in volume, and bubbles or blisters make their appearance

on the surface. The interior will now be found to be filled with minute vesicles or cells containing carbonic-acid gas. After awhile the mass becomes more fluid, acquires the taste and odor of vinegar, and begins to diminish in volume. But, if, before this latter change has occurred, it be placed in a heated oven, the process is arrested, while the gas in the cells already formed expands by the heat and the mass enlarges still more. Presently a crust is formed upon the surface, and when the mass after sufficient baking is withdrawn and cut open it presents the well-known honeycombed appearance of household bread; soft, palatable, and easy of digestion.

This is breadmaking in its simplest form; a process of the highest antiquity and practiced under various modifications by nearly all the nations of the earth; but it has been reserved for modern science, with its refined analysis and delicate instruments, to explain the nature and causes of these phenomena and to show in the whole process a series of the most remarkable and interesting transformations known in organic chemistry.

The gluten, first, upon the application of water, is distended and converted into a viscid mucilage, which envelopes the granules of starch and thus reduces the whole to a homogeneous paste.

The yeast, by means of the peculiar principle, called enzyme, contained in it, gradually renders soluble the starch granules and transforms them successively into dextrin, sugar, and, finally, alcohol and carbon dioxide; the quantity of starch acted upon being in proportion to the amount of yeast employed, and to the time during which the process is suffered to continue, as the ferment has the power of multiplying itself

indefinitely out of the substance of the yeast.

The carbon dioxide—which is the result of the decomposition of the starch particles, that is, of such as have reached the final state of their transformation—is liberated in minute bubbles throughout the entire mass of the dough, the viscosity of the gluten preventing it from escaping.

The baking, which by its heat destroys the vitality of the ferment (the activity of which is due to the rapid propagation of the yeast-plant) arrests the further development of this acid and hardens the walls of the cells which contained it, fixing the light loaf in that porous state which, by the greater amount of surface presented to the action of the gastric fluids, so greatly assist digestion.

The part which the gluten plays in this process is threefold: It absorbs the water, retains the gas, and expands in baking. So peculiar to the gluten is this power of absorbing water, that a strong flour (one rich in gluten) may be known by the quantity of water it takes up in the mixing; in other words, a flour will absorb water just in proportion to the gluten it contains.

Hence, the value of a strong flour to the baker, since by its absorptions of water it yields a greater weight of bread, or, also, it can be used to enrich a poor, starchy flour; while the consumer, although in purchasing such bread he buys more water to the pound, actually loses nothing, but, rather, is gaining by his bargain, inasmuch as the richer the bread is in gluten, the more nutritious it is and at the same time more palatable.

The second office that the gluten performs is equally important to the production of a light loaf of bread.

Starchy flour, or what is the same thing, flour poor in gluten, will not rise well, the dough not having sufficient elasticity and tenacity to retain the gas as it forms in the fermentation; and pure starch, although by admixture of yeast it gives off carbonic acid gas abundantly, for the same reason cannot rise at all. This holds good, likewise, with regard to corn-meal, which cannot be made into light bread without the admixture of wheat-flour, its gluten not possessing the same qualities for bread-making as are held by the gluten of wheat.

The third property of gluten in wheat, that of expanding by heat, independently of

fermentation, is probably owing to the conversion of the water, which it contains, into vapor.

Increasing the Food-Value of Our Vegetables—While our best efforts should be directed toward better fitting our staple crops and our commonly used plants for their accustomed fields of usefulness, there are special and new uses for plants that should receive attention at the hands of plant-breeders and plant-introducers.

The farmer can produce staple crops in which are starch, cellulose, and sugar in greater abundance, and for a small, often a very small, fraction of one cent per pound. These carbonaceous substances take nothing from the soil, neither nitrogen nor minerals, and their uses as plant-food and fertilizing material are limited when they are returned to the soil to improve its waterholding power.

On the other hand, the nitrogenous elements of our food-plants, in addition to their value of about 4 cents per pound as food, are worth as fertilizers 2 cents per pound.

Now, if the farmer can obtain 4 cents per pound for his nitrogenous products and pays out in return 2 cents per pound for fertilizers, he has realized but 2 cents per pound on the nitrogenous elements utilized as food.

We should seek to increase the yield of nitrogenous elements per acre as well as the total yield of crop, just as the growers of sugar-beets must increase the yield of beet-sugar per acre, rather than the tonnage of the roots, and the breeders of dairy cows must increase the yield of butter, rather than the yield of milk. Thus, we should add to the nitrogenous content of our cereal and fodder crops.

In the case of corn-grain, it will be perceived that, the higher the latitude in which we can raise it, the greater will be the proportion of its starchy content. Its feeding-value as a fattening food is thereby increased. On the other hand, is it the growth and development of bone and muscle we most desire, then we should select as a grain-feed such as possesses the largest nitrogenous content.

Southern-grown cereals yield a larger proportion of nitrogen (gluten) per bulk than do the northern-grown. The Algerine wheat contains the largest proportion of gluten, hence, its great value as a hu-

man food supply, in the shape of macaroni and allied products.

We should also aim to increase the percentage of nitrogen in fodder, since thus a less amount of expensive grain-nitrogen will be required.

Again, of greater importance is the breeding of clover, cowpeas, alfalfa, and other plants which gather so much of their nitrogen from the air.

If we can increase, by breeding and selection, the amount of nitrogen these plants gather from the air, it will be like increasing the value of commercial stock by increasing their dividend yield.

To change each of these plants so that their range of successful production would be enlarged 10 percent, their nitrogen 10 percent, and their yield increased 10 percent, where now grown, would cost only a small fraction of the resulting increase in value. Increasing the nitrogen in this manner, would, in the aggregate, be a very large increase in nitrogen gathered from the air into the soil of the country.

There is no reason why the nitrogen content of a variety cannot be increased as well as the sugar content of our sugarcane, which belongs to the same family as maize.

The Kansas experiment-station found that ears of corn of a variety grown for thirty years on the same farm varied in nitrogen content between 3 and 13 percent, and that indifferent varieties of corn varied about the same.

Professor Hopkins, of the Illinois station, proved that corn plants with grain high in percentage of nitrogen generally produced grain with some nitrogen, thus proving that this quality can be improved; and he showed that something can be done at making the selections by mere inspection and without chemical analysis, although chemical analysis is a great aid.

Those kernels which, when cut in half, showed the largest portion of dark-reddish material next the bran-coat (where the gluten, or nitrogenous portion, is principally located) had the highest percentage of nitrogen, thus enabling the careful farmer to select for more nitrogen.

This does not exhaust the amount of nitrogen in the kernel, for, a large portion of the framework of the starch- and other cells is made up of nitrogenous material, else would our white flour be of less value

than it is today (poor in gluten as it is at the present time, being on the average but 13 percent, while in the whole grain it is from 20 to 25 percent).

A. T. CUZNER.

Gilmore, Fla.

WHAT VALUE IN "CLINICAL MEDICINE"?

In renewing subscriptions for various publications at the end of each year, I ask myself, "What value do I receive from this or that publication?" So, this same question has arisen year after year when the renewal of *CLINICAL MEDICINE* has come up for decision. The answer is in this wise:

THE AMERICAN JOURNAL OF CLINICAL MEDICINE is valuable to me chiefly because of the practical suggestions it contains. There is a certain amount of reading-matter in the journal for every man, but, the suggestions which I have received and which I have put into practice in my everyday work is the thing that brings it to my desk. It has taught me the cleanout and keep-clean doctrine, and this is of more value a thousand times than the subscription price for a lifetime. I have learned from it the value of tincture of iron in certain chronic states of the cervix uteri. Although I have operated upon hemorrhoids "from time immemorable," I learned the value of the injection-method in certain cases by reading *CLINICAL MEDICINE*. I have been taught the important uses of calcium chloride. The combined sulphocarbolates have been my "right bower" in many a battle. Other matters, too numerous to mention, could be brought out in the same way, but, these are enumerated merely to illustrate the idea.

Occasionally I read the letters of doctors who say, "I read it from cover to cover". Now, I do not read any journal from cover to cover. I read what I want to read. I read only those things which I deem of interest and profit to me. Pursuing this plan, I read in *CLINICAL MEDICINE*, first of all, the editorials. I congratulate the editorial writers of the journal-staff. There is nothing too praiseworthy to say of them. Their sayings contain a brand of wholesome philosophy that should be absorbed by

every doctor. You give us everything—as you should—from the lighter affairs of life, to weighty considerations of medicine. I read with pleasure your philosophy of life as well as the handling of sociological matters. I do not “take much stock” in so-called “sociology”. I take issue with the editorial writer of a month or so ago who “hollered” for his ticket for the sunny South, or some such rot. I think I know exactly who that writer is, and I ask you, sir, as man to man, howthehell can the average doctor buy a ticket to anywhere? Sunny South!

I read most of the leading articles. Some of them are of no interest to me. Such merely should be scanned by everybody. They are of interest, because they are not befogged in a scientific smother that a man has to wallow through in order to arrive. (Not very good language, but, it tells what I want to say.) The personal letters printed from month to month I read after finishing the editorials. They are interesting because of the personal matters set forth and the visions one gets of the trials of the doctor. Never a man in any walk of life bumps right up against a stone wall with such a fullstopping wollop as does the doctor.

I congratulate you upon the “personal appearance” of the CLINIC. It is always clean and well dressed. It is convenient to hold in the hand and the paper is clean and good.

I congratulate you upon your long-continued success. I am aware of the fact that your road has not always been a smooth one. You have succeeded in spite of that.

May you continue to prosper both in a scientific and a financial way. In the meantime, I will continue to read “here an’ thar” and profit therefrom to best of my ability.

J. H. BRISTOW.

Portland, Ore.

“A REAL DOCTOR—AND A REAL WOMAN”

O where, O where has that sluggard been sleeping who wrote “A real doctor and a real woman, too,” in the December number, page 872? His prejudice against women doctors has acted as effectively as a large dose of hyoscine and morphine, or he must have learned that there are about five

thousand women doctors in this good old United States, from Maine to California, doing just as good practice as any man doctor, just as good surgery and just as good eye, ear, nose, and throat work as any man could do; and that with all their work, they are in good health. Many women die from tuberculosis and who have never practiced in the slums. The woman doctor is not the only woman who has to go out at all hours or endure physical strain and be exposed to all kinds of weather.

If he thinks our girls so valuable that they should not be subjected to exposure and bad weather, why just pick out the women who practice medicine? . . . Associate ourselves with men physicians? O, no, we will practice alone; let the men work up their own practice. We have no desire to pass the plums to someone else, and let the false idea go out that the woman is not qualified to carry her own responsibility and to practice without the assistance of a man.

Any woman who lives with a man as his wife and would not cheerfully go in any kind of a conveyance and in any kind of weather any distance to relieve him if he were suffering has not the characteristics that are required to make a true physician, no matter how hard she may blow her own horn.

Any woman who can practice medicine and surgery well can do any such simple mechanical thing as making jelly or bread. Indeed, any woman who has brains enough to make even a fair doctor has enough of them for any household requirements. Why write a special article on one who blows her own horn and ignore the thousands who are quietly working successfully and saying nothing?

BELLE C. ESKRIDGE.

Houston, Tex.

[And now a word by the writer of that “awful” editorial: “There is nothing in that editorial that applies to Belle Eskridge. She is amply qualified, physically and professionally, to cope with any emergency presented by the physicians’ life. Moreover, she has the best of the argument. For, woman has fully demonstrated her ability to fulfill any and every duty befalling upon the physician. The incident may stand as an apt illustration of the fact that I have alluded to more than once, which is, that

every one of us is inclined to form his judgment and prejudices from single impressive cases occurring to him, rather than from the accumulative experience of a lifetime. The death of that lovely girl, forty years ago, made an impression upon me that has never been effaced. Even yet, I can't avoid being sorry when I see a bright young girl called upon to do the work of a private in the ranks of the doctor's army, much as I would when seeing a dog fed out of a fine china dish. The American woman is something so fine and precious that it is up to us men, every one of us, to protect and shield her, every one of her, from everything harmful or unworthy. But, as to Doctor Eskridge—my name is on her diploma."

Perhaps this comment will square things with Doctor Eskridge.—Ed.]

THE "PACIFIC MEDICAL JOURNAL" CEASES PUBLICATION

The Pacific Medical Journal, the oldest journal on the Pacific Coast, which has just completed its 60th volume, has been acquired by Dr. William J. Robinson and will be consolidated with *The American Journal of Urology and Sexology*. The combined journal will continue under the editorship of Doctor Robinson and will be published from 12 Mt. Morris Park West, New York City.

ABOUT "CLINICAL MEDICINE"

Enclosed, please, find two dollars to renew my subscription for *CLINICAL MEDICINE*, which I have been taking and reading closely since 1897, when it still was quite a modest little journal, although chuck full of meat. Since requested an expression of judgment on the journal and your work, I will tell you.

The journal has changed very much, in that it does not contain nearly so many helpful clinical reports from the firing line, all over the country, as it once did. Compare one of the numbers of 1914 and 1915 or of 1907 and 1908, with those of the present years, and this fact will be very apparent. I regret that the doctors from the malarial belt do not write more about their work and experience with this hydra-headed monster. Nearly three-fourths of all my cases this year have been malarial ones. For all that, *CLINICAL MEDICINE* is a great

and helpful journal and I have found it very inspiring and helpful in my work. I also miss the splendid, ringing, clearcut, inspiring editorials Doctor Abbott used to write. I have found Doctor Waugh's editorials most helpful, also, and I am ever so much in debt to him for useful, positive recorded experience, which I have used with splendid results in my practice.

I have been in constant "rough and tumble" village and country practice since 1868, and, now, at seventy-one, am in excellent health and am still in active work. Wishing your great journal abundant success and prosperity, I remain your faithful subscriber.

L. B. BATES.

St. Matthews, S. C.

[Thanks for the compliments and, even more, for the frank criticism. Criticism is always acceptable when it is honest and when it is as kindly meant as are Doctor Bates' strictures on *CLINICAL MEDICINE*. He tells us that he misses the many helpful clinical reports from the firing-line all over the country that the journal once contained so plentifully. To tell the truth, so do we ourselves. Unfortunately, it is harder to get practitioners to write nowadays than it is to pull hens' teeth. We don't know why this should be, and we do not think that it need be.

Let us go back to our former custom. *CLINICAL MEDICINE* does not want to be a "highbrow" journal. It prides itself on being practical and human; but, you men and women in the active work must do your bit to make *CLINICAL MEDICINE* what you want it to be. Remember, we are sitting at the study-table. We do not get out much among patients; some of us not at all, and, anyway, we have to do our own writing for the editorial department. So, let us have *your articles*, especially therapeutic ones, *practical, sharp, snappy*; and, let us make this volume of *CLINICAL MEDICINE*, our Silver-Jubilee volume, the best ever.—Ed.]

HOW TO CURE GOITER

Dr. C. S. Cope asks us to correct certain errors that appeared in his article on the above subject in *CLINICAL MEDICINE* for January, on page 80. The concussion treatments were administered for two months, not for ten; and the last sentence

should read: "I did not remove *all* the goiter; neither do the surgeons, who advocate excision, remove *all* of it."

ANOTHER CROP SHORTAGE— BABIES

I notice, on page 869 of the December number, an article entitled "Another Crop Shortage—Babies." Nearly every journal and magazine one picks up nowadays contains something along the same lines. I also find that on page 873 the editor relates that one of the most charming girls he ever met killed herself trying to do the work of a doctor in the city slums.

In the first place, everybody seems to be so anxious to have women produce children in order to cover up the shortage occasioned by the war. But, as the war has taken all the prime stock, would it not be a wise idea, first to educate the women how and what to breed themselves to, if the soundness of the future race depends upon them? I suppose, if you were to go into the country and find one of your wise old farmers selling his best heifers and bulls while breeding his weak, knot-headed heifers to long-horned, big-headed bulls, you would return to your sanctum and write a long article on what a wise and intelligent farmer he were.

Then you pick up your little old obstetric bag, go down the line or out in some fine home, and deliver a luetic or a tuberculous woman of a child, begotten by a male most likely of not any better stock. Instead of being something to be proud of, the child is a sore-eyed, big-headed, cadaverous looking object. What do you do, what do all of them do, what do our laws do, and what do our professors do, standing in the rostrum and teaching the young medics? A trip to any of the children's charity hospitals and along your streets will give you the answer.

Do not you think it is about time that the human family should begin to absorb a few commonsense ideas from some old rancher? Instead of filling up our magazines with articles advocating the raising of more babies, better fill them with articles teaching how to raise better babies; by selection of perfect males and females to breed; providing for the proper sterilization of all diseased and infected stock, by the removal of tubes and the vas deferens; educating the perfect ones in how and when

to breed and how and when to prevent conception. I should like to see an article on the subject from some good, levelheaded man, one who would handle the facts, without gloves.

C. M. TINSMAN.

Adin, Calif.

[CLINICAL MEDICINE hardly deserves the sarcastic criticism expressed in Doctor Tinsman's letter. Indeed, we have always insisted upon the reasonable hygienic and wholesome bringing up of children so, that they may grow into men and women whose offspring will escape the curse of inherited disease or tendency to disease. The very article to which Doctor Tinsman takes exception points out that school-girls and young women should be trained in physiology and sanitation, not only for their own sake, but, also for that of their prospective children. And the same advice has been given insistently time after time.

It is a fact that the European countries have lost an alarming number of vigorous young men in their most favorable years for the purpose of producing offspring, and it is also a fact that the problem of preventing depopulation is a serious one. But, whatever means to this end may be contemplated by the worshippers and prophets of Kultur, the authorities and the informed people of the allied nations approach the subject in such a manner as to secure the best results possible under the circumstances.

It is easy enough to talk about the desirability, indeed, the necessity of raising better babies. The "selection of perfect males and females to breed" is a dream of somewhat doubtful beauty, which no legislation ever can translate into actuality.

It is only patient, persistent, and long-continued education, it is the correction of the social evil, the economic distress, and the many, many unfavorable factors that will, in the course of time, bring about a different attitude on the part of young men and young women in the selection of their mates.

Men and women can not be selected for breeding like cattle. This is such a trite observation that it should not require repetition. The constant reiteration of such an impossible demand is so futile an argument that it does not call for refutation. In this, as in all other conditions, we can

not deal with ideal conditions, but, must make the best of existing circumstances.—Ed.]

HOW TO DEAL WITH DISLOYAL PERSONS

I will present a problem and likewise my individual solution of it.

In every place, as also in this community, there are individuals who are against the U. S. A. in this war. You all know the breed of ingrates I refer to. What is our correct attitude toward them? As an American, I feel that these people should not exist among us, and, yet, as a physician, I am called upon to save or prolong their existence. I am between aiding an enemy or betraying the trust placed in me by an enemy. I am an American first and a physician after that, and herewith submit a New Year's resolution, to wit:

Whereas, war compels every citizen to draw a sharp distinction between friends and enemies of the U. S. A., both at home and abroad, and

Whereas, I am an American first and a physician afterward,

Therefore, I make this resolution this first day of January, 1918:

That my professional aid will not hereafter be extended to persons or to the families of persons not in active support of our government in this war, believing that such persons should not exist in our midst and that services rendered for the purpose of prolonging their existence are prejudicial to all loyal citizens and to the U. S. A.

C. W. CROMPTON.

Silverdale, Wash.

[The duty of the physician is owing, first of all, to sick persons, without any reference to their nationality, their morals or any other characteristics. The mere fact that the services of the physician are requested is sufficient to obligate him, if he desires to remain true to the spirit of the oath that has come down to us from Hippocrates—and that we all have vowed to obey and jealously adhere to.

We can not admit that the suggestion of our correspondent, to refuse medical aid to those in need of it—on the plea that they are disloyal to the United States of America—is justified. It would be even less prop-

er to refuse medical services to the families of disloyal persons and to make innocent women and children suffer for the wrongs committed by heads of the families.

As suggested, we are bound to succor all those in need of our aid who apply to us. We do not believe, however, that knowledge of disloyal acts on the part of our clients should be kept secret and that such acts fall within the provision of the professional secret. While extending to such people all the aid that we can render as physicians, we are justified, the present writer holds, to lodge information with the proper authorities, who shall cause such disloyal persons to be supervised and prevented from giving aid and comfort to the enemy. Further than that we cannot go.—Ed.]

MAGNESIUM SULPHATE IN PELLAGRA

I find magnesium sulphate a very useful remedy in the treatment of pellagra in the first stage. Using this remedy, I keep the bowels active for several days, and give strychnine, 1-40 grain several times daily, as a supportive tonic. The magnesium-sulphate purge seems to eliminate the poison of pellagra from the system.

W. B. DORRIS.

Saundersville, Tenn.

[It is not surprising that magnesium-sulphate should prove of value in the treatment of pellagra, since perhaps, or probably, it is the best eliminant with which we are acquainted. Whatever may be the cause of pellagra, it is certain that the disease is associated with a more or less profound intoxication, which before all must be corrected if curative measures are to prove successful.

The reader is referred to various articles on the subject of pellagra in the files of CLINICAL MEDICINE, also to the editorial comments on some of them. In addition to elimination, antitoxic treatment with the aid of calcium sulphide has been found of service, as have also intestinal antiseptics, such as the sulphocarbolates. A curative effect appears to follow the administration of mercurials and arsenicals, of the latter the sodium cacodylate possessing notable merit.

Finally, the primary importance of general hygienic and of dietetic measures is not

to be left out of consideration. Concerning the appropriate diet in pellagra, there appeared an interesting communication in *CLINICAL MEDICINE* for October 1916, page 864.—Ed.]

WHAT SHOULD THE DOCTOR DO?

Answering "H" in the November number of *CLINICAL MEDICINE*, on page 839, I would say: Let the knowledge die with you.

I. N. BRAINERD.

Alma, Mich.

[Short and sweet. This answer to the question propounded by "H" has the advantage of being in accordance with the so-called professional secret. Frankly, we are strongly inclined to side with Doctor Brainerd.—Ed.]

WARNING AGAINST FRAUDULENT COLLECTORS

Physicians have often been victimized in various ways, one of the most damnable being through an appeal to their kind-heartedness and their desire to help presumably deserving young men to enter the medical profession. We have repeatedly warned against a certain brand of solicitors and collectors and now find it necessary to mention specifically certain persons who represent themselves as agents for The Advance Society, University of Illinois, North American Building, Chicago, Illinois, T. C. Drake, pres.; R. H. Borland, Bus. Mgr.; L. R. Adams, Sec. and Treas.; Lee Shepard, Agent. These parties are operating all over the country, soliciting subscriptions for various journals and incidentally endeavoring to collect any money which they may learn to be due pharmaceutical houses.

Physicians will confer a favor by notifying us at once if approached by such agents.

Pay money for accounts of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* only to authorized representatives.

It may be well to add that a list of similar fraudulent concerns was printed in *The Journal of the American Medical Association* for December 22, 1917, page 2134; also in the preceding issue, December 15, page 2056. We are informed that salesmen of The Abbott Laboratories have been told of various instances where physicians were

defrauded by such people, notably by representatives of The Advance Society.

OLD-TIME EMERGENCY-SURGERY

I am enclosing two dollars for renewal of my subscription for *CLINICAL MEDICINE*. I am getting along in years and think every renewal will be my last; but, I want it as long as I live.

Here is a report of a case that happened in my house, so that I know whereof I speak. I do not write as much as I did formerly; in fact, I do not write at all, except on rare occasions such as this; however, all but one of my articles sent to medical magazines found acceptance—for a wonder. Here is my report:

I am speaking of a case that came directly under my observation something over fifty years ago. A girl, about 12 years of age, was bitten by a large Newfoundland dog, the flesh being torn to the bone, in places. The dog had been chained for some time, thus making it more ferocious than otherwise it would have been. One day, when the dog was set loose, this girl happened along and started playing with a daughter of the family. Thereupon the dog, supposedly thinking she was hurting the latter, sprang upon her and would have killed her had not some of the inmates of the house rescued her. A boy on horseback (that being the usual way of summoning a physician at that time) brought the doctor from six or seven miles away, who came rushing in without an anesthetic of any description and not even a surgeon's needle or anything to close the wounds, nor an antiseptic of any kind.

It would take time to drive back, and it is doubtful if he had much of the needful for such an occasion in the little corner of their living-room used as an office.

After some little deliberation, every one present, save the doctor and the patient (who was too shocked and dazed to realize what had happened), being in tears, a spool of coarse Coats' white thread and a large common sewing-needle were used to close the wounds with a dozen stitches or more, nothing used being sterilized, not even the doctor's hands. Some strips of old linen (sterilized gauze scarcely was known at that time) soaked in tincture of arnica were applied; this dressing being changed as often as it got dry. That was the only

remedy used. For a wonder, the wounds healed without leaving any unsightly scars, save on one arm, but, here they would be covered by the sleeve.

What would be thought of such a surgical operation at the present time? Why, even the laity would hold up their hands in holy horror at such a transaction. However, it is plain that some patients will live under almost any conditions, while others will die when seemingly the very best possible is being done.

The physician was a man of good repute. I could give his name, but, as he has been dead for many years, it is not worth while. If the child had died, no blame would have rested on him, reference to the poison of the dog's teeth would have satisfied the people that a cure was not possible.

C. M. H. WRIGHT.

Blaine, Ill.

[*Haec fabula docet*—well, it teaches that many things happened before the days of modern antiseptic and aseptic surgery that now seem impossible and even incredible. It also teaches that, after all, the human organism enjoys a very great resistance to bacterial harm and that it can overcome and repair injuries from which we almost certainly would expect serious septic complications. Perhaps this case was an unusual one. May be so. But, if that were the case and if the resistance of the human organism to bacterial infection were not very great, the human family would have been exterminated by sepsis long ago.—ED.]

IS INTELLIGENCE DEGENERATING?

In the January number of CLINICAL MEDICINE are references to several matters which, when analyzed by comparison with former days, provoke a feeling of antagonism and resentment.

What is the matter with the world? Is it going crazy Are we degenerating and becoming infantile in our intelligence instead of progressing and becoming more adult in our attitude to the problems confronting us?

The subjects which lead to the asking of these questions are remarks relative to some new angle of the antinarcotic law, the alcohol question, heroin and others.

Has it come to the point where a chosen few have been set up to judge, and have

pronounced their decision that the human race no longer possesses intelligence?

When the writer's grandfather was a young man, he started life for himself with a wife, a fair sized farm, and a log house. He provided himself with what he considered a few necessities essential to log-cabin days. Among these were a pint bottle of laudanum and a pint bottle of spirits of camphor. He asked no odds of anybody nor did any one ask any odds of him.

In the course of events he had three children, two sons and one daughter. Likewise in the course of events, and genealogically speaking, the daughter became the writer's mother and the two sons his uncles.

One uncle became what in these days would be termed a mechanical engineer and metallurgical chemist. This, it may be seen, gave me the opportunity to gain an early insight into the realm of science. At the age of ten I purchased and used for my own edification such substances as cyanide of potassium, various acids and salts, together with many other things of equally interesting chemical composition. At this time no one asked any odds of me, nor did I ask any odds of anybody.

The laudanum episode dates back close to 90 years ago, and, I believe, there is a remnant of that pint still in the family somewhere. The episode of the chemicals happened about 37 years ago and I am still at it.

To stand, today, close onto the threshold of fifty, and find oneself confronted with "poison purchase laws", "antinarcotic laws" and others—isn't it enough to make one ask, what is the matter with the world?

Candidly speaking, these things have the aspect of being an insult to one's intelligence; at least, as intelligence was measured some fifty years ago.

Is the present-day intelligence so degenerated that it must be treated paternalistically? Let it be hoped that the day will come when the individual will again be credited with possessing an inherent intelligence of his own.

It may be timely to add, for the benefit of those who may either think, act or speak foolishly on reading this article, that the writer was raised in an atmosphere of earnestness, sincerity, intelligence, truth and common sense. He was never taught to believe that dragon flies sewed up children's ears, that snakes' tongues were stingers,

that handling toads produced warts or that cats had nine lives, together with a host of other nonsensical frauds that have infested parental and youthful minds from time to time.

F. N. RICHARDSON.

Cleveland, O.

[Doctor Richardson's kick is that of a strong individual, whose nature is self-reliant and possessed of decided convictions. No wonder that he resents interference with his personal liberty. But, there is another side to the question and this is discussed editorially on page 106.—Ed.]

CAPSICIN FOR DELIRIUM TREMENS

Subjoined I submit to my fellow practitioners what I can recommend as a safe and sensible treatment for delirium tremens. And one virtue is, its simplicity.

Stir together 40 grains of capsaicin and 16 ounces of sweet milk and administer this mixture freely until the patient is relieved.

This has helped me out safely and satisfactorily in every case I have been called on to treat since 1876, when it first came to my notice by some remarks by old Doctor Frissell, of Wheeling, West Virginia, at one of the meeting of the medical society of the county of Ohio and of the city of Wheeling and of which I was at that time a member, having my office at 41 South Penn Street, corner of Virginia Street.

Doctor Frissell said: "Stop giving opium or any of its derivatives or any depressing treatment. All the patients I have thus far treated promptly died. What these patients needed and what I now use is capsaicin and milk, a diffusive stimulant in a food-vehicle." How reasonable this sounds to us alkalometrists, who insist upon the free dilatation of the arterial system for the relief of congestion.

Last year, I was visiting a relative who is superintendent of an infirmary. While I was there, a young man of 25 arrived, suffering from delirium tremens after a continuous debauch of eight weeks. He was in the last stage and it was feared that he would die. So, they asked me to prescribe. I did. The capsaicin mixture was given at once. The patient vomited freely from time to time, but, finally the stomach began to absorb the remedy, and in three days he was well. The fellow

then thanked me for saving his life and promised to reform.

The superintendent and the attendants looked upon the case as near a miracle as they had ever witnessed.

Doctor, you can do this, too. Don't lose your head, but, keep up the dosage.

C. S. COPE.

Detroit, Mich.

[This treatment suggested by Doctor Cope is very excellent, so far as it goes. Of course, it is understood that there are other indications requiring attention, such as, elimination, diet, general hygienic measures, and so forth. If the capsaicin in milk, as suggested by Doctor Cope, is made use of by any of our readers, we should like to hear of their results.—Ed.]

PHAGEDENIC ULCERS TREATED WITH CHARCOAL

The following history is typical of a series of 8 cases of phagedenic ulcers, so common in the tropics, treated by the external application of powdered charcoal.

The patient, a plantation laborer, was admitted to the hospital on April 26 last, complaining of painful ulcer of the leg, and the examination revealed an ulcer of oblong shape, 9 cm. long, 6 cm. wide, and situated on the external surface of the lower third of the right leg. It was surrounded by an areole of inflammation and covered by an exudate of grayish color, closely adherent to the tissues below, as a false membrane. From its edges there issued a fetid greenish fluid. Removing part of this membrane, the ulcer was seen to have sharply defined borders and to extend below the subcutaneous tissue, involving the muscle in its posterior part. In the anterior portion, the surface of the fibula was seen to be black and necrosed over an area of 5 by 2 cm. The right inguinal glands were painful to pressure.

The patient was cachectic; his temperature was 37° C. and the pulse ran 100. A physical examination revealed nothing. No signs of syphilis were observable. The blood examination revealed anemia, poikilocytosis, and eosinophilia; no malarial parasites. In the feces, ascarides and necator americanus were present.

Scrapings from the edge of the ulcer, stained by Wright's method, showed the

bacillus and spirillum of Vincent. The bacillus existed in both forms, with and without spores, and with its extremities rounded or pointed.

The diagnosis was, true phagedenic ulcer. The treatment consisted in prescribing betanaphthol, for the hookworm on three successive days, and santolin and calomel for the ascarides. Blood tonics also were given. Local treatment: forcible removal of the false membrane, and daily application of dry vegetable charcoal to the ulcer, and covering with gauze and bandage. Also elevation of the leg.

On the second of May, the sequestrum of the bone was removed, and the granulation-tissue was healthy. On the 10th, two-thirds of the ulcerated area already had healed, while the bacterial examination proved negative. Complete recovery was established on the first of June.

FRANCISCO CARRENO,

Medical Officer of Canton of Minatitlan,
Veracruz, Mexico.

POTASSIUM PERMANGANATE IN BROMIDROSIS

In the December number of *CLINICAL MEDICINE*, you published an article on bromidrosis, and you ask for a remedy for those feet that have the "unspeakable odor." Well, I have it. It is permanganate of potassium, and here the way to use it:

Prepare for the patient a stock solution composed of 25 grains of potassium permanganate and 16 ounces of water, and label appropriately.

Tell the patient that he is to make of this a foot-bath by adding 2 tablespoonfuls of this purple ready-made solution to 1 quart of warm water.

Before using it, he first is to take a thorough foot-bath with hot water and soap, then to rinse his feet in clean water. Having mixed the 2 ounces of stock solution and 1 quart of warm water, he will put the freshly rinsed feet into this and allow to soak in it for half an hour—preferably before going to bed. Then dry. [The brown precipitate on the skin presumably will discolor the towel.—Ed.]

This has never failed to give entire satisfaction whenever I have had occasion to prescribe it, and it gives me much pleasure

to hand it on to those whose patients require it.

C. S. COPE.

Detroit, Mich.

[Try this, those of you who have this distressing affliction or who are called upon to treat patients for it. Then let us have an account of your results, please.—Ed.]

INTESTINAL AUTOINTOXICATION AND SYSTEMIC AUTOTOXEMIA

The normal act of defecation is a function as yet unknown to the majority of the human race. The normal psychophysical impulse to emptying the rectum is yet be acquired by man. Ignorance, coupled with disease of the lower bowels, has made man a walking Augean stable, filled with self-retained poisons. He is prematurely aged and sick from foulness of all tissues of his body. He lacks the clean, clear freshness of youth, the clean, pure, sturdy body of mature years, because of the lack of normal bodily elimination during his carnate existence.

Man will never be clean mentally or physically until endowed with a higher spiritual conception of life, its worth and its duties. Intestinal autointoxication and systemic autotoxemia are the bane of human existence, from which none escape. Youth is blighted; manhood is aged, sick and saddened, and, if a ripper age is attained, the burden of ills is increased and the victim often hopes and prays for the Reaper of all carnate forms.

Obstipation, constipation, stasis, and undue retention of foul intestinal excreta and gases form a subject as old as the human race. How many doctors today have any idea of even the most common cause of gastrointestinal and accumulated bodily foulness, like the mythic Augean stables, which were never cleaned until Hercules performed his wondrous task.

A knowledge of the most common cause of undue retention of foul feces and gases, that so universally and sorely afflict man, would be a great aid to the afflicted; then the lesser frequent causes could be studied in their order of preventing the normal action of the bowels.

Before Job uttered his lamentations, and up to the recent new dispensation in the healing art—mineral oil and surgery—the liver was blamed for all gastrointestinal

troubles. Libraries were filled with books on the subject of the liver and of its many regulators, also of agents for digesting the food taken by man. Diet lists were arranged under the captions "may take," "must not take," all for the purpose of restoring a foul body and putrefaction in the gastrointestinal apparatus to a normal hygienic state and action. Cause unknown, hence, the ridiculous makeshift efforts to allay symptoms distracting the mind and body of the afflicted.

Before and since the Biblical mention made by Moses and Samuel of a disease called "emerods," the whole history of stomach and bowel medication and diet has been a series of guesswork. About forty years ago, I began the treatment of an ailment called proctitis and sigmoiditis, and its numerous local primary and secondary symptoms, by a rational, safe, and sane method of diagnosis and treatment. Since then, daily clinical observations have convinced me that proctitis and sigmoiditis are a universal ailment afflicting the very young and continuing their insidious progress during the entire life of the victim. It has been my lifelong hobby to discover a being possessing healthy lower bowels, and my clinical material has been from the age of six months up to mature years, and I have yet to find one person free from the disease.

Therefore, I am able to state, from many years of study, that chronic disease of the lower bowel is a universal ailment and is the predisposing cause of the chronic self-poisoning of the human race. I am also convinced that free, normal intestinal evacuation should occur three times in twenty-four hours, to avoid a muddy, yellow complexion, frequent headaches, occasional dizziness, chronically coated tongue, mental dulness and depression, anemia, emaciation, muscular fatigue, lack of rest and sleep, constipation, diarrhea, flatulence, gas-belching, general abdominal distress, hysteria, neurasthenia, melancholy, lypemania, extreme nervousness, absence of desire to live and welcoming death so as to end it all. Almost daily I have heard their lamentations, also their hopes and joys, and seen the bloom of health return.

Proctitis usually originates in the wearing, in infancy, of a toxic diaper, and, if by any chance the child escapes the malady during the diaper-period of its life, child-

hood and youth are susceptible times, so that none escape this most insidious and common chronic malady that afflicts mankind from the cradle to the grave.

Is it any wonder that man has never known the normal impulse to stool, and suffers from retained foul feces and gases, intestinal autointoxication, and systemic autotoxemia, which is plainly indicated by the tongue, eyes, teeth, nose, skin, and other organs of the body?

With all, I might say about the symptoms of chronic proctitis, et cetera, that I am not unmindful of those caused by duodenal and gastric ulcers, cancer, appendicitis, cholecystitis, et cetera. No doubt disease of the above-named organs is, in the majority of cases, directly traceable to chronic constipation and absorption of inflammatory exudates that overburden all the organs with foul substances and inhibiting their normal functions.

My plea is for a normal hygienic and athletic race of men and women, with bowels normally moving three times in twenty-four hours, and the skin and kidneys also undisturbed in their functions of elimination. This can be brought about by the intelligent use of rectal speculas for diagnosis and treatment.

ALCINOUS B. JAMISON.

New York, N. Y.

COLD-PACK CANNING AND BOTULISM

The United States Department of Agriculture authorizes, in substance, the following statement:

Botulism, also called sausage-poisoning, is a specific intoxication brought about by bacillus botulinus, an organism first isolated from insufficiently cooked sausages that had caused a severe outbreak of food-poisoning in Belgium in 1895. The nausea, gastric pains, visual disturbances, muscular weakness and other symptoms are caused by a definite toxin formed in protein-carrying foods, both animal (meat, milk) and vegetable (beans, pease, corn).

This bacillus is a spore-forming anaerobic organism, but, one that is not very resistant to heat, the spores being killed by heating to 80° C. for one hour, while the specific toxin is destroyed by boiling. Consequently, thorough cooking at the boiling-temperature is all that is necessary to kill the organism and destroy its toxin formed

in the food. Thus, cases of botulism principally result from eating food that has been infected with the organism and not sufficiently cooked. Sausages present ideal conditions for the growth of this bacillus and constitute a frequent cause of botulism—from which, in fact, the name of the disease is derived (*Botulus*—sausage). Other infected meat-products and also, in a few instances, canned vegetables and fruits have been given as causes of botulism.

Recently, Doctor Dickson, of San Francisco, has reported (*Jour. Amer. Med. Assn.*, Vol. 69, 1917, p. 966) a study of eleven outbreaks of food-poisoning, occurring during the past eighteen years in California, which he attributes to eating canned vegetables and fruits. In these cases, no definite information is available as to the methods used in canning the vegetables; but, it is reasonable to assume that the contamination of the goods may have been brought about by the selection of food of poor quality, by lack of cleanliness in packing, by the neglect of some essential steps in the process, by failure of the heat to penetrate to every part of the can.

There is no danger that the type of food-poisoning known as botulism will result from eating fruits or vegetables that have been canned by any of the methods recommended by the United States Department of Agriculture, providing that such directions have been followed carefully and that no canned goods are eaten that show any sign of spoiling. In case of any doubt as to whether the contents of a particular can have spoiled, they should be rejected. If this stuff then is to be fed to chickens or other animals it first should be well boiled.

In the cold-pack method of canning given out by the Department of Agriculture, only fresh vegetables are mentioned for canning.

The process of sterilizing recommended is as follows: Cleanse, blanch, cold-dip, pack in clean, hot jars, add boiling water, seal immediately, then sterilize the sealed jars at a minimum temperature of 212° F. for one to four hours, according to the character of the material. Since the spores of the bacillus botulinus are killed by heating for one hour at 175° F., there is no reason to believe that this organism will survive such treatment.

The bacillus botulinus has been found in the digestive tracts of some animals, espe-

cially pigs and the fowls, probably occurring there in the same manner as does the organism of tetanus in the intestinal tract of horses. It is not a parasite in the ordinary sense, but, rather, a saprophyte. From these sources, it may be deposited on the soil, although attempts at isolating it from the soil have, generally, given negative results.

PHENOL-GLYCERIN SOLUTION FOR WOUND TREATMENT

Now, that the moist dressing has become popular again, I wish to bring to notice a mixture that I have used with the utmost satisfaction, both as preventor and eliminator of sepsis, for something over twenty years.

The mixture is composed of 3 parts of glycerin and 1 part of alcohol, to which 2 percent of liquefied (95-percent strength) carbolic acid is added.

I am well aware that carbolic acid has been taboo and placed in the discard for some time since. But, no matter, the present irrigating fluids that are being used so extensively these days are simply some of the old favorites that have been languishing among the mothballs for many years. For, as I understand it, the Dakin solution is simply a remodeling of the old Labarraque's solution, which was used more or less successfully as a wet dressing during our Civil War.

This and similar solutions, although doing good work, make for time and trouble, inasmuch as they have to be employed as a more or less continuous irrigation, to wash away purulent discharge as soon as formed. They also have the further disadvantage of undergoing chemical changes which render them irritating and unfit for use after a week or ten days.

This glycerin solution does not change, always is the same, simply grows more mellow with age, like good wine. By its use, septic processes are soon brought under control, and wounds, surface or otherwise, treated with it remain quiet, without any of the old-time, classical signs of inflammation—redness, swelling, pain.

An easy formula to remember, for preparing a small quantity, is as follows: Pour into a quart-bottle (32 ounces) 4 drams of carbolic acid (of 95 percent strength). Fill the bottle 3 parts full with glycerin, then fill up the bottle with pure alcohol. Shake,

and the mixture is ready for use. This is, practically, a 2-percent solution of phenol. For very nasty septic infections, 1 more dram of the carbolic acid may be added, thus bringing it up to about 21-2 percent.

To cover the slight odor of the acid¹ and to assist in the deodorizing of ill-smelling wounds, I am in the habit of adding 40 drops of the oil of lavender or the oil of eucalyptus to the quart of the solution. As all such oils are strongly antiseptic, they add somewhat to the efficacy of the mixture. Still, this is not essential.

The treatment consists in the packing and dressing of wounds and cavities, septic or otherwise, with gauze wet with the solution. The ordinary No. 3, or hospital-gauze is used. No sterilizing is necessary, since the solution does that—clinically so, at least. To prepare the gauze for use, pads of different sizes are folded and dropped into the solution, then squeezed out with moderate pressure. Thus prepared, they may be kept in glass receptacles, always ready for use.

Superficial wounds usually are easily taken care of. The deep wounds and infection-processes, with all their miserable possibilities for dead spaces, destruction of tissue and the retention and pocketing of infection products are the ones that make for trouble and anxiety. This mixture, if intelligently used as a packing and dressing, will do away with just such conditions. The hygroscopic action of the glycerin causes extensive and profuse capillary drainage and prevents septic extension, while the phenol and alcohol exercise birth-control over the vagaries of septic life and activity.

This method of treatment practically converts a deep wound or cavity into a superficial one—and, in the latter kind, the questionable drainage-tube has no place.

After the proper packing, a sufficient quantity of gauze is applied, in order to afford protection and take up the discharge. This layer must be covered with waxed tissue before the bandage is applied; the object of this being to keep the dressing moist and to prevent it from soaking through everything it comes in contact with. Wounds

thus treated are not easily reinfected and are soon ready to close.

There are many advantages in the use of this mixture: It is easily and quickly prepared; it is absolutely safe, nonirritating, and nonpoisonous; there is no blistering, burning, nor retarding of the healing-process; it does not adhere to the tissues, but, on the contrary, is always easily and painlessly removed, to the great relief of the patient and the satisfaction of the surgeon.

The dressing always is good for twenty-four hours, while more often forty-eight hours is the time. The usual painstaking cleaning of the wound is not necessary; just ordinary cleanliness, and the moist gauze will do the rest. It eliminates pain and soreness, and the patient is always comfortable. It makes joint-surgery easy and safe; even that old bugbear, the knee-joint, loses its reputation for cussedness under this drainage and dressing. I have seen many apparently vicious subcutaneous processes clear up under the continued local application of the stronger mixture. Furthermore, it is an ideal packing in abdominal work, when drainage is necessary, and a most excellent covering for surgical wounds after they are closed.

Always shake out the gauze lightly before using, and, in packing, always allow for pressure. There are no disadvantages.

Perhaps this summary may seem somewhat extravagant, but, please remember that I have been using this mixture most extensively for a long time and am quite familiar with its possibilities. Indeed, I have come to regard it with something after the nature of a composite feeling of dependence, security, and gratitude—gratitude, for the deliverance from many hours of anxiety and uncertainty.

LAWRENCE T. NEWHALL.

Brookfield, Mass.

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[According to Dakin and Dunham: "A Handbook on Antiseptics" (New York, 1917, page 72), alcohol or glycerol materially reduces the germicidal efficiency of some antiseptics, particularly those of the phenol class. These authors cite Kroenig and Paul to the effect that phenol dissolved in 98 percent alcohol was devoid of bactericidal action when tested against spores. Cooper has correlated this fact with a diminished protein precipitating action of al-

¹It may not be amiss to point out here the error in the very common practice of abbreviating carbolic acid into "acid." It should be remembered that this substance, while exhibiting certain characteristics of the acids, belongs to a special chemical group, namely, the "phenols." It should not be referred to as "this acid."—Ed.

colic phenol when contrasted with aqueous phenol; but, whatever the explanation may be, in the author's opinion it is clear that alcohol is not a desirable solvent for phenolic disinfectants.—ED.]

SERUM USEFUL IN PNEUMONIA ON SIXTH DAY

I was called hurriedly to a married woman suffering intensely from a severe cold on the chest, and I found both her lungs completely congested, her temperature 104.8 degrees, in fact, a fully developed case of lobar pneumonia. I was informed that another physician had called four days before, pronounced it a slight cold and said she would call again, but, did not. Meanwhile the woman grew worse, and I was sent for, as stated. Conditions in the home not being good, I had the patient (aet. 26) removed to an adjoining residence. The woman being pregnant six and one-half months, miscarriage threatened, so, I called another physician in consultation.

We at once made vaginal examination, found considerable dilatation, and the head partly protruding. It was decided best to empty the womb, and we did so. Then I put the patient on a mixture of ammonium chloride and codeine, and also gave granules containing aconitine and digitalin, one every half hour, besides turpentine stupes, and so forth. The temperature would not budge, remaining at 104.6 to 104.8 degrees F., and the respiration ranging between 35 and 45, the pulse between 120 and 130. I put a good nurse on the case at once, one who has had considerable experience.

We stayed with the case, the patient on the sixth day hovering between life and death. So, as I am a firm believer in serum, I decided to give it. I ordered a 15-minim dose for the first injection. This was given at 1:30 p. m. on Friday. In forty-five minutes, we saw results. Things began to look better. Reaction was quick and the patient stood it remarkably well. Within seventy-six hours, I gave three injections in all; the second and third doses being 18 minims each. The patient now is doing nicely. There is no infection from the delivery, but, she still has a little temperature, ranging between 99 to 101.4 degrees. There is a slight "cloud" over the lower lobes of the two lungs, so, I am going to give another injection of serum. This, I think,

will clear everything up nicely and the patient will soon be on her feet.

Thus, no one need to be afraid to use serum. Some physicians are prejudiced against its use, but, it should be studied carefully, every action of its administration and therapeutic value. This is my second case of lobar pneumonia in which I have used serum, and in both the disease was advanced. In both, results were more than satisfactory. The nursing, of course, is of highest importance, just as in typhoid fever; also, it is necessary to have a nurse who understands her business.

Gerber, Calif.

H. SAMPSON.

[Doctor Sampson is to be congratulated on his good results, even though two swallows do not make a summer. Yet, we share his faith in the immunizing treatment of pneumonia. The point that occurs to us most insistently, however, is, why was this treatment withheld until the sixth day? Was it not to run chances to delay?—ED.]

GOAT'S MILK FOR BABIES

The highest compliment, I think, that I have ever received, as a physician, was the quiet remark of an official of our local railroad, whose young wife died under my care a few years ago, as he handed me his check, that he could not have expected more devoted attention if she had been my own daughter.

The doctor needs all the honors that are accorded him, since he does not get all the rest that is due him, as a rule, and so I am going to say that I know that the readers of CLINICAL MEDICINE will be as much interested in a case here reported as if the baby in question belonged to each one of them, just as I am; and then I expect that every one will go further in the investigation of a subject that has not received the attention of the medical profession—on this side of the Atlantic, at least—that its importance merits, namely, goat's milk for babies.

A few months ago, the editor of this journal suggested that the goat might be used much more generally as "a wet-nurse," particularly because of the liability of cow's milk to convey tuberculosis to infants; whereupon I sent him a photograph of a goat serving in that capacity. This was reproduced in these pages, with some re-

marks on the superiority of goat's milk over cow's milk, as a substitute for mother's milk. (See December issue.) I have received many letters from physicians asking for further information, and I hope the editor may decide to have a thorough treatment of this subject. By way of creating further interest, I now submit the report on my experience with my own baby.

When we decided that it would not be best for the little fellow's mother to supply young John Gilpin Allen with his first



Baby Allen—9 months old.

nine-months' meals, I suggested to the eminent counsel in the case, including a registered nurse, whose name is familiar to readers of mother's magazines and women's journals as a writer on the care of infants and children, the advisability of using goat's instead of cow's milk. None of them seemed to know anything about the goat, beyond the fact that some such animal is an important adjunct in the initiatory ceremonies of certain secret societies.

Some years ago, I made a special study of milk in general and of goat's milk in

particular, and I have seen many cases in which, I am sure, goat's milk saved the child's life, as it did of the one pictured in the December number of *CLINICAL MEDICINE*. In fact, the family physician in this latter case—Dr. C. F. Ellis—has become an enthusiastic advocate of goat's milk, for the rich man's baby as well as for that of the poor man. I think it was five books and pamphlets on the goat that he drew from a drawer on his desk, a short time ago, after he had been out to my place to see a new Saanen that I had recently got, to see if the ears of mine had the proper pitch to warrant her genuine, as the Toggenburg has the "Swiss bells".

Up till this time, I had not needed a goat, for my own use, and, although in these Ozark hills we not only have the scenery that Preachin' Bill said "God must a' bin lookin' at when he finished makin' the world and saw that it was beautiful" and also the most remarkable water this side Joachimsthal, but, the place that a bunch of goats from Switzerland would choose sooner than any other in America, if they could, I had never seen a real milk-goat in the eight years that I have been here. I tried to find one by correspondence; but, although I found several places where there were a few goats, they had none to sell or none that was giving milk at that time (early in March); for, it is more convenient to have them kid a month or two later. So a month later I selected from a herd of mixed breeds, that I found not far from home, one that had the largest udder and brought her home.

There was nothing the matter with the baby when he was born—quite the contrary—but, he seemed to have inherited a tendency to prefer what was good for him, and, so, the cow's milk, modified by all the formulas that ever were devised, wouldn't go at all; and no doctor in the place nor any combination of them could tell why—and not one of the fraternity hinted at goat's milk.

The goat evinced a decided objection to having her milk taken from her in the new way; however, after some experimentation, we succeeded in getting a little of her lacteal secretion. There came a marked improvement in the baby; but, the meager supply of milk lasted only a couple of months. the baby losing ground as it dwindled. Eventually I succeeded in getting two milk-

goats from a doctor near New Orleans, who had gone there to find a milder winter temperature and to live on bread and goat's milk. The improvement in the baby was marked as we substituted the goat's for the cows' milk. One of the physicians, Dr. Henry Pace, who had known of the difficulty we had had in the use of cow's milk, seeing our child a few days ago, declared him, after due inspection, "simply perfect."

In the preparation of my "Daily Health Hints" for the newspapers, I have quoted CLINICAL MEDICINE more than any of the other medical journals, all of which I try to scan regularly, with a view of getting practical suggestions for my readers; and, knowing that it is the editor's purpose to get for its readers hints that will be useful in the physician's daily work, I have been returning some of its favors, including these hints on the use of goat's milk.

The doctor, from his training and practice, always looks for the reasons of things; and the reasons for the marked superiority of goat's milk over that from cows, for invalids as well as for infants, I may have an opportunity to explain in some future article.

I am enclosing a picture of the baby, taken when he was a little over nine months old, his measurements, all but one, equaling those of the standard for twelve months, so that the editor may see the evidence for what I have said. The chest measurement has been distinctly greater in proportion to that of the abdomen when he has been on the goat's milk, and all ordinary indications of health and growth are much better.

THOMAS J. ALLEN.

Eureka Springs, Ark.

[We are wondering whether the "new way" of drawing the milk, to which Nanny objected at first, was that employed by the she-wolf who nursed Romulus and Remus. Did the junior Allen get his milk by the direct process, actually "nursing" the goat? We confess, that would be a new one on us; although, come to think of it, we have read something of the sort, somewhere, and the illustration on page 922, December issue, moreover, depicts this direct process. However, the essential fact is this, that goat's milk is excellent for babies—from two weeks to eighty plus years of age. The Bureau of Animal Industry, U. S. Depart-

ment of Agriculture, has devoted a considerable amount of study to the question and has succeeded in persuading some breeders to raise these useful and inexpensive milk-animals. Several interesting publications on the subject may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at small cost.—Ed.]

THE SUCCESSFUL TREATMENT OF GLEET

In chronic urethritis, the daily use of the metal sound will materially aid in the successful treatment. However, in this case, it should more properly be called a dilator, since it is through dilation that the appeal to the sympathetic nerve-endings stimulates an increased blood supply and thus improved nutrition. The blood stream is the life-stream; it is both the supply-train and the funeral train. Keep these trains running on schedule time, having first removed the active cause, and your "chronic" will soon be well.

But, remember, in order to get real stimulation of that "life-wire" center, the dilators must be gradually increased in size to toleration. The meatus often is the tight place, but, don't let that bar you. Stretch it if possible, cut it if need be.

A stricture may be encountered, with pain and bleeding. Be gentle, but, persistent; it will, and must, yield.

Gently massage all painful areas while the dilator is in place. To use clean—surgically clean—instruments goes without saying. A tall closely covered jar filled with a strong solution of formaldehyde makes an excellent sterilizer. Give the instruments a few minutes' immersion in this bath before and after each treatment, after which they should be dried off with sterile cotton and lubricated with oil of calendula. Then you can feel sure that your instruments are clean.

Giving ten to fifteen minutes of dilation, followed by the medication of a silver solution or carbenzol on a cotton-covered applicator carefully applied to every sensitive area, and your treatment is finished for that day.

Pay no attention to the "morning drop", but, watch carefully those sensitive areas. They should begin to improve in a week and entirely disappear in from two to six

weeks. When they have vanished, the "morning drop" also will be gone. Try it!

The foregoing treatment is also indicated in the later stages of acute urethritis.

R. D. POPE

Du Quoin, Ill.

"SELECTIVE SERVICE BOARDS"

In recent numbers of your valuable magazine, I have noticed you have used the term "Exemption Boards" when writing of various draft boards. As one of the examining physicians of a local board in this city, I am convinced that many drafted men look upon these local draft boards as places where they are to be exempted from service, not where they can be helped to render service. The proper name for a place or thing means everything.

In this city there is a factory where a "Claims Department" was started on ac-

count of accidents, etc. It was swamped with applications, so the name was changed to Adjustment Department, and all honest claims were *readily* settled.

Would you use your influence to see that the term "Selective Service Board" or "Selective Draft Board," or merely "Draft Board" is used? It seems to me a matter of importance.

JEROME WALKER.

Brooklyn, N. Y.

[We endorse Doctor Walker's suggestion. We have already written him that hereafter we shall employ the term "Selective Service Board" when speaking of these bodies. The word "Exemption" is truly a misleading one. The purpose of these boards is not to exempt men from the Army—it is to *secure* men for the Army; and this should be impressed upon the thousands of young men who are coming up for registration and examination.—Ed.]

A SOLDIER'S PRAYER

BY CAPITOLA McCOLLUM

LORD God of hosts, Lord God of earth,
Who gave dear Christ a glorious birth,
From heaven's starry throne look down
To save us from the war god's frown,
And give to us a star to shine
To light our way to Palestine.

Lord God of east, Lord God of west,
We're marching for a final test;
And as we go with hopeful song,
To free Thy land from foreign wrong,
O lend Thy aid to us, we pray,
And hasten us along the way.

Lord God of war, Lord God of peace,
O grant to us a swift increase;
And ere the holy day arrive,
O give us that for which we strive;
And let us with a trust and vim,
March forth and win Jerusalem.

Lord God of life, Lord God of hope,
On now our armies bravely grope;
And may we yet in triumph stand
Within thine ancient, holy land;
O Father, give us Palestine,
To rule in peace and love divine.

Lord God of truth, Lord God of laws,
Imbue us with Thy righteous cause;
O let us tent 'round Galilee,
And fix our thoughts on Calvary,
That Zion's flag be soon unfurled
Mid shouts of joy around the world.

Lord God of hosts, Lord God of earth,
Renew in us the Savior's birth;
And from each grieving, wounded life,
Dispel all thoughts of gloom and strife,
That there may be a reign of good
And universal brotherhood.

In the World War

TRAVELING ON TROOP TRAINS

EVERY medical officer will get his turn at accompanying bodies of troops of, say, from 150 to 600 men, on troop-trains, across this country. Sometimes he will be the only medical officer on board, having from two to four enlisted men of the medical department of the U. S. army to assist him. At other times, there may be several medical officers accompanying one train.

I made several of these trips, one from Texas to southern Illinois, with two first-class privates of the medical department for assistants. The train was made up of tourist-sleepers, 3 men to a section; 2 men sleeping in a lower berth and 1 in the upper. The train was well heated and lighted. At the end of one car was a kitchenette with ranges for cooking. Meals were served hot and on time—boiled or roast meats, stews, stewed fruits, fresh bread, coffee.

Traveling this way under special orders, each troop-train constitutes a separate little expedition, makes no unnecessary stops, and to a great extent is self-governing. The commanding officer of the train issues all orders, over his signature, for guard and police and kitchen details, and all hours for sick-call.

We had a "medical and surgical chest" issued to us, before leaving, from the infirmary, this containing cotton, bandages, adhesive plaster, compressed tablets, rubber basins, towels, soap, antiseptic tablets, a few instruments, and similar necessities. With this chest to hand, one can handle almost any case that may come up. The C. O. consults the M. O. as to the best hours for holding sick-calls, then issues the order.

I placed my chest in one section of one of the sleepers, nearest the end of the car. My two enlisted men had the opposite section, while I had one in front of them.

The other officers had the section in front of us.

We held sick-call twice a day, as we carried a great many men who were new, recruits of only a few weeks' service. Men, unseasoned, who have not yet learned how to keep themselves in condition, who still have their civilian hankerings for pastries, candies, and such trash, which they purchase at each opportunity, consequently pay the usual price nature demands, in the form of indigestion, pimply faces, boils, headaches, constipation, and the rest.

The army-ration usually gives a man as much carbohydrates as is deemed good for him. A well-balanced ration provides proteides, carbohydrates, and hydrocarbons in sufficient amount to satisfy all body-needs.

Twice daily, while rolling along over the rails, the C. O. accompanied by the M. O. walks through the train. Beginning with the kitchen and crew, he sees to it that the men handling the food have their hands clean, food properly covered, and food enough for the trip. Then the inspection goes on through the cars. Wash-rooms and toilets must be clean and tidy, water enough for the toilet and flushing the bowls, floors of cars must be swept, no paper or matches or cigar-stubs be lying around on the floor, equipment placed in an orderly manner, men washed and shaved, and so on.

Once on each trip, measles-inspection is held. The C. O. and the M. O. come to the men, exposing the latter's abdomen and chest. Measles and mumps are the most prevalent contagions, that is, the most common of the so-called diseases of childhood. Fortunately, I never found any on my trips so far, but numerous cases in camp.

The officers eat together, each paying 50 cents a day to the organization they are traveling with. They may add to their table anything they may be able to purchase at the different stations the train

stops at for water, changing engine, or for any other reason. The meals, on the whole, are very good.

While proceeding slowly through Texas one night, there were several severe bumps and then the train came to a stop. A private hurried in, stood at attention, saluted, and reported that two rail-cars were derailed. The C. O. replied, "Very well, report back to your sergeant." The officers, myself along, hurried back and found the rear troop-car leaning at a dangerous angle, while the caboose was lying on its side. A guard of 12 men was quickly selected and thrown around the two cars, then taking lanterns, we went down the track a short distance, to ascertain the cause. We found a broken switch and also the conductor, who had been riding on the caboose and when it left the rails, feeling it tipping, had jumped. We took him back to my end of the car, made a berth up for him and cleaned and bound up a few cuts he had. He soon was feeling all right. We cut loose from the two derailed cars and proceeded to the next station, where we picked up two cars and, shaking hands with the conductor, saw him off and proceeded.

Usually on these trips, when the train stops for water or another engine, twice a day, the troops detrain and in formation march around through some of the nearby streets for fifteen minutes, or have setting-up exercises. This, I think, is excellent from a psychological as well as physical point, as it gives the men a chance to see the people of the town and gives the people of the town a chance to see and know that there is such a thing as a war, a death-struggle between Democracy and Autocracy. For, there still are many people in our country that cannot understand why our troops are going abroad to fight; can not understand that the cold facts are that, if we did not, we should very soon be fighting the same implacable enemy on our own soil, with consequent destruction of billions of dollars' worth of property and serious loss of life.

The morale of the men, as I see them, is very good; very little of the grandstand-play business; just a keen appreciation of the size of the task ahead and a cool, keen, calculating spirit to acquit themselves well

of their task. I maintain that, for individuality, the American soldier is second to none in the world. Never have I seen or heard a soldier, from the newest recruit up, who for a moment thinks that we can lose in this game. If they contemplate failure at all, it is of such a dim visionary form that it is barely perceptible; to be reckoned with the same as a rainy day or a cold spell, but, not as a check to the onward trip.

The makeup of the enlisted men of our American army is nothing short of wonderful. The aviation section, where I have been so far, in addition to the flyers, consists of virtually all trained men, trained in their particular line, such as mechanics, machinists, chauffeurs, repairmen on gas-engines and motors, electricians, telegraphers, wireless telegraphers, plumbers, carpenters, and so on. These men, shortly after enlisting, have been trade-tested by a board of officers, to weed out the carpenters that are not carpenters and the engine-repairmen who are not what they claim to be, so that before a squadron leaves for overseas the exact qualifications of each man are known, and he is placed where he is deemed to be best fitted.

One can not but be filled with wonder at the powerful workings of the spirit of patriotism which, powerful as the magnet for steel, draws these young men from all parts of the country, who, in addition to the splendid physique which army enlistments requirements call for, have these special trade qualifications that are essential for this section of the army, and have entered this branch, to do their bit; trained in their particular lines, and as essential in their section as we physicians are in ours, or as the combatants are in theirs.

I finished one trip, rolling along through the sand and cactus of Texas, on and up to the snows of southern Illinois; remained at a station for three days, and then on, on again with another, across states; climbed the Allegheneys, past the home of the Pocahontas coal, down on the other side of the mountains, north to Jersey, through the tunnel under the East River, to the concentration camp at Long Island. Here again one could see on every side evidences of the thoroughness with which this country is going into the war, and here one is

sobered by the contemplation of the vast unknown.

ROBERT C. MURPHY,
1st Lieut., M. R. C.

Garden City, L. I.

PROTECTING OUR SOLDIER BOYS

Approximately the same number of men in the army are rendered temporarily unfit for active service or else are permanently invalidated from venereal disease as are incapacitated either by wounds or any other form of disease. This astonishing disclosure is the result of recent investigations by French and English medical officers. And it is believed that this condition of affairs is even more horrible among the armies of the central powers.

Venereal infection constitutes a greater menace and is infinitely more far-reaching in its effects than any layman can, possibly, appreciate. For, it means not merely the loss, to the army, of a man trained by months of hard work. It means much more than that a man badly needed in the ranks has become, because of the medical and hospital attention he requires—attention which should never have been necessary—an encumbrance and a handicap to the service; it means that he actually may prove a permanent menace to public health.

Most men and women are astonishingly ignorant of the perils of venereal infection and of the profound influences such infection may have, not alone upon the individual himself, but, upon his wife and upon what children unfortunately may be born to him.

However, some vague idea of the insidiousness of this condition may be formed when it is understood that among the best-informed medical men of the day the belief is gradually growing into a conviction that not only locomotor ataxia, softening of the brain, besides other nerve lesions, result from syphilitic infection, but, that tuberculosis, diabetes, and possibly numerous other chronic diseases have their initial cause in hereditary syphilis—in a luetic infection contracted by some careless ancestor. In fact, my friend Dr. George Lennox Curtis, of New York, ascribes the larger part of his extraordinary success in

the treatment of tuberculosis to the fact that all his tuberculous patients receive a modified antisiphilitic treatment.

But, even if the luetic origin of tuberculosis and other serious diseases were only a fanciful theory (which it is not), the present condition should be sufficiently vital to arouse public and official interest.

For instance, every night, in Riverside Park, near where I live, young soldiers and marines are consorting with girls, many of them mere children in years, yet, unhappily, in experience as old as vice itself. One need not be trained in medicine to know the result of these rendezvous. And this clandestine association is going on all over the country, in every city, town, and village where there are soldiers and girls.

The disgraceful and polluting conditions disclosed by United States Marshal McCarthy's raid on a resort in New Rochelle (N. Y.) a few weeks ago uncovered only a one-thousandth of one percent of the total depravity existing in this country.

It is charged that German agents may be instrumental in encouraging and fostering these conditions, with the intent to cripple our army and navy by deliberately infecting our young men. If this is true, it must be confessed, in all candor, that the plan is fearfully and wonderfully successful.

But, in all probability, we need search no further for causes than those which are obvious to every psychologist, sociologist, and medical man. Hundreds of thousands of young men, instinct with life and high vitality, are taken from their normal environment—an environment in which family relations, criticism, censure, or even ostracism by their friends, church association, and other inhibiting influences have hitherto acted as a restraint upon their moral life. Thousands of these young men never have even tasted a glass of liquor.

These men are brought to training-camps not far from towns and cities and "turned loose". Natural social impulses, impulses that formerly were satisfied in safeguarded ways, no longer can be gratified; their accustomed social life is not now available. On the other hand, saloons and dance-halls are accessible, and scores of thousands of professional and amateur prostitutes are there to lure. The result is, the stench of New Rochelle, the debauchery of Newport.

the clandestine rendezvous of Riverside Park and of ten thousand similar places throughout the country. In view of our hypocritical unwillingness to recognize the universality of the sex-impulse—next to self-preservation the most potent of all human impulses—the inevitable happens.

What is the solution? Sociologists, phil-anthropists, and hundreds of palliators believe that the War camp-recreation committees, club-houses, athletic contests, supervised dances, and occasional invitations to some social function would solve the question.

The people who believe this are sincere superficialists. Possibly a certain number of young men would, if supplied with social recreation, defer repeatedly and seductively offered opportunities for normal sexual gratification. But, every honest well-informed doctor who has studied Forel, Krafft-Ebing, Wm. J. Robinson, G. Frank Lydston, and other authorities on sex-questions will agree that it is quite as impossible to crush out the sex-instinct—once aroused by rebounding health, nutritious food, suggestion, example, familiarity with its face, and omnipresent invitation and opportunity—as it is to put out a prairie-fire, once it has gained headway.

There is one way, and only one, in which venereal disease can be stamped out, and that is, by prophylaxis—by sanitation. The same antiseptics a surgeon uses to prevent infection will, if promptly and properly employed, enable a soldier to prevent infection. The same principles that are employed to heal an ulcer are equally efficacious in preventing the development of certain varieties of ulcers.

A friend of mine, an Italian consul, tells me that venereal infection is almost unknown in the Italian army. The reason is a simple one. It is, because no soldier may absent himself from his post, camp or barracks without permission of the medical officer in charge. The wise Italian medical officer, recognizing the animality of humanity, provides the recruit with a packet of antiseptics. Then, if he neglects to use

these and becomes infected, he is deprived of pay, sent to a military prison, degraded in the ranks (if an officer), and otherwise punished.

The consequence is, that, as said, the Italian army is free, virtually, from venereal disease. Its hospitals are not cluttered up with thousands crippled by Bacchus and Venus. Its doctors and nurses are free to devote all their attention to those who legitimately require it.

And we, of this country, can accomplish these same results if

1. We imprison every man or woman who sells or gives a soldier or sailor a drink of alcoholic liquor.

2. If we provide every soldier or sailor with a prophylactic packet and instruct him carefully in its use.

3. If we, by fines, imprisonment, degradation in the ranks, or dishonorable discharge, punish any man who becomes infected.

4. If we recognize that a healthy young man is a vigorous young animal, and govern ourselves accordingly.

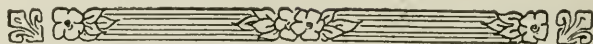
The seriousness of this matter can not be overestimated. I would not have it understood that venereal disease is not curable. But, most emphatically, I would insist that it is not curable in first-line trenches nor in the battle-camp.

With desperately wounded men and urgent operative cases demanding constant and exhausting service, the venereally infected private can be sure of only scant and most unsympathetic attention. The victim of Venus will be shunted aside in favor of the victim of Mars. Yet, this undesirable is quite as numerous as is his bunkie who only has been wounded by a bullet, and far more dangerous—ultimately—to his own people than to the enemy in front.

Anyhow, his mother sent him to us, expecting us to reduce his hazards, and to give him the best care we can possibly give him. Let's do it.

EDWIN E. BOWERS,
Member of the Vigilantes.

New York, N. Y.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by *GEORGE F. BUTLER, A. M., M. D.*

THE SECRET OF TELEPATHY

WE may, provisionally, define telepathy as the alleged power or science of casting one's thought, by means of mental suggestion, into the mind of another. That is to say, it is generally supposed by the telepathists that there is a power in the minds of men or of some men which under proper conditions enables one to concentrate his thoughts so strongly on a given phrase of words or on an idea as to project that idea, by mental suggestion, into the mind of another person, causing the latter to hold it as his own and act in accordance with it. A drunkard, for example, the telepathists believe, may be so strongly inoculated, by a healer's thought, with the idea that he must not drink any more that he will not do so, even can not if he would—the very notion of it makes him ill. There have been many cases of healing, not only of drunkenness, but, of other diseases, which on the surface appear to be caused in this manner—so many, in fact that thousands who have had experience with telepathy would unhesitatingly take oath that it is possible for one person to throw his thought into another person's mind without the medium of words or acts and to compel him to accept that thought and obey it. They believe they have seen the thing done, some of them many times; numbers of them are sure that they themselves have done so frequently and can do it again, while others have had it done to themselves—have felt what they suppose to be the healer's power working on them, filling their minds with new thoughts and their bodies with strange sensations.

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When a victim of drink or rheumatism or toothache comes to a telepathist, asks his treatment, sits ten minutes in silence, the while the healer, without a spoken word, suggests certain thoughts, and he then rises cured, what can be said but that the suggestion was what worked the result? It

would be useless to deny the cures; for, that they do occur, is so well known by every person who keeps abreast of the times that to be ignorant of the fact would be a reflection, if not on one's intelligence, then assuredly on one's state of general information. From Alaska to Florida, and from Maine to California, these telepathists have, for years, under various names, (such as Christian Scientists, faith-curists, psychologists, mental healers), been proclaiming their doctrines and, apparently, working beneficent results on the bodies and fortunes of their adherents—yes, and even on the bodies and fortunes of many who are not their adherents, but, the contrary. Their very enemies have profited through them, and, though they may refuse to give them the credit, they can not deny the healing; for, while before they were sick, they now, after treatment, are well.

And that is just the question at issue. The cure is admitted—but, what or who performed it, and how was it wrought? The telepathist answers these questions at once, by saying that it was he who performed it, and, by mental suggestion. The skeptic retorts that he felt no suggestion and that, if he is cured, it is simply a coincidence; it was time for him to be cured; the healer happened to come along just as the attack of disease had run itself out. He will, perhaps, instance a certain "cold" of his. Always for a cold he had taken a particular medicine and it always had cured him in three days, at least, he thought it had. But, once he caught cold when he was where he could not obtain this medicine, so, he took nothing, and, behold, this attack of cold also was cured in three days. "Your treatment," this skeptic then may say, "was like that medicine, and my disease now was like that cold. You had nothing to do with healing me."

The man who asserts this is, as a rule, one of those whose wife or sister or mother has asked the telepathist's aid, without the

knowledge of the patient. He only finds it out when he is exultantly told of it, and then is angry and will say anything. Still, he honestly does not believe in thought-suggestion, while the telepathist as honestly does believe; for, this one is not an isolated case in his experience. If it were, it might, indeed, be a coincidence. But, the many similar cases he has had scarcely could come under that head.

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In short, there is a great deal of mystery enveloping the subject. The telepathists themselves admit that they are ignorant of the methods and reasons of its laws. Nevertheless there is not in the world a more simple thing, once it is understood; and, certainly, there is a no more beautiful and comforting thing. Indeed, it is so very beautiful and so very comforting that if one who understood it should keep it to himself his action would amount to little less than a crime. Fortunately, he who does understand it *can't* keep it to himself. The knowledge, by its very nature, forces itself into expression.

As a matter of fact, this knowledge isn't anything new; that is, it isn't anything new in practice, though it certainly is in theory. There never was an intelligent physician who did not make use of it at times, even though he might be unaware of doing so.

In short, telepathy, in the last analysis, is one with the principles of medicine, and there is no conflict between the two. The results of both systems are wrought in precisely the same way, the one using a drug, in the other telepathy being the agent. The one system can not take the place of the other, for, each supplements the other, each occupying a different field of action. Every telepathist should be a physician, if he wishes to be a healer of disease, and every physician should understand telepathy.

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Perhaps the most illuminating light that could be thrown on the subject at once would be, to ask a telepathist—any one of them who had had much experience—a few questions like these: "Did you ever receive a telegram or a letter from a person at a distance asking you to treat him absently, at a certain hour, for a complaint he had?" He would answer yes, for, there is not a telepathist of any fame who has not had many such cases. Suppose we say then,

"Did you ever cure anybody in this way?" "Oh, yes, many people," he returns. And he is sure he is right about it. He even may add of his own accord that he treats people at a distance who are having their teeth extracted and that through his power they feel no pain under the dentist's hands. He usually adds something of this sort, for, it seems a hard thing to do and he is proud of his ability. Moreover, his statement is true, at least, it certainly is true that people have sat in dentists' chairs, and, with a telepathist miles away casting his thoughts out toward them, have endured the extraction of anywhere from two to fourteen teeth without feeling either fear or pain, while, lacking the healer, they have always been acutely susceptible both to fear and pain in like circumstances. There is no doubt that this is so.

These seem tough stories to swallow; however, they remind one of the early martyrs who, bound to the stake and while the flames licked their bodies only looked in holy rapture to heaven, unconscious, apparently, in the exaltation of their minds, of any physical suffering, and dying with songs of praise and triumph on their lips. We know that this is true of these martyrs. Was there a "telepathist" somewhere at work upon them? Yes, there was—the same that is working with us today, as we shall see.

As the third question to our telepathist, we will put this one: "As to these telegrams or letters which you have received from patients at a distance soliciting your treatment at a certain hour, has it ever happened that any of them failed to reach you in time for you to give the treatment as desired?" "Oh, yes, he will answer, "that has happened." Then he will begin to regard us curiously or will smile or do any of a number of things, as may comport with his temperament, for, he knows what is coming and that we have him where he hasn't a leg to stand on. But, we will be inexorable, because all we wish is, the truth—as it is all he wishes—and this is the only way by which we can arrive at it both for him and ourselves. So we continue: "What happens to the patient then—is he cured, you never having treated him?" "Not always," he will admit. "Not always! Then, sometimes he is cured?" "Oh, yes, it has been that way." "Without your treating him at all?" "Yes." "How do

you explain that?" "My friend," he will say, "I don't explain it. I know only that it is so. Telepathy is a curious thing. If *you* can explain it, I should be very happy to have you do so."

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This is the kind of conversation that throws a flood of light on telepathy at its very root. If the patient, when he is not treated, but, thinks he is being treated, receives the same benefit that he receives when he is treated, it would seem that the direction in which to look for the meaning of mental suggestion is indicated with precision. But, the curious thing is, that the telepathist, in his eager search for the reasons why he can cast his thought into a patient's mind, leaves this highly significant fact out of his calculations, regarding it as a vagary, a "sport" of the mind, so to say, one having no legitimate ancestors.

And thus in mental suggestion, as in so many other things, the only stone that should be made the cornerstone is rejected by the builders: for, it is in this very reception, by one mind, of a thought that never was suggested to it by another, though that mind *believed* it was suggested, that the explanation of the mystery of telepathy lies.

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And now let us go straight to the heart of the matter, beginning at the very roots of our existence as human beings.

The materialistic notion of the process by which thought arises was lucidly given by Aristotle, and it has been found impossible, from the materialistic standpoint, to improve upon it. His is the theory accepted today in the halls of science as literally as in this philosopher's own time it was by his followers. And this, notwithstanding the fact that there is an oversight in the very beginning of his argument, an oversight so palpable, once it has been pointed out, that it seems ludicrous that he should have been guilty of it or that any real scientist should read the argument without discovering this oversight, as also the fact that the same completely upsets and reverses the whole theory. Or, it would seem ludicrous to us, did we not recognize the truth of these words of Emerson's: "God screens us evermore from premature ideas. Our eyes are holden that we can not see things that stare us in the face until the

hour arrives that the mind is ripened. Then we behold them, and the time that we saw them not is like a dream." In short, we can see only that which we are fitted to see, however plain it may be, and there is nothing ludicrous about it. It is a law. Aristotle himself had the light held up to him by his own schoolmaster Plato; but, he could not realize it as a light at all, because of the bent of his mind, and considered it rather a darkness of fallacy. But, it is advisable to give Aristotle's view, for, then we shall be better able to make our own view plain.

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According to Aristotle, all animals possess sensation. Of these animals, there are two classes, those whose sensations remain, and those whose sensations do not remain. Those whose sensations do not remain possess no knowledge beyond sensation, while those whose sensations do remain are again divided into two classes, according as they are able or not able to gather the permanent sensations that remain. The process, therefore, by which thought arises is, first sensation, then permanency—memory. Then from repetitions of memory functioning comes experience. And, lastly, from experience, come the arts and knowledge; these constituting what we call the acts of the mind.

Do you see anything that looks like an oversight in that?

Where did this body come from, this body which Aristotle takes for granted, without explaining its existence; this body in which the sensations arise, and without which there could be no sensations, no thought, and, therefore, no Aristotelian theory, nor even Aristotle himself? Any scientist today who were to commit such a blunder as to leave that out would be laughed at. Nevertheless, there are scientists who accept this theory, seeing no blunder at its very root, as there are telepathists who accept the usual theory of thought-transference, despite the known fact that messages never sent are being "received" as strongly as those that are sent. "Our eyes are holden that we can not see things that stare us in the face." Aristotle himself was thus held on this very blunder of his, for, Plato had already pointed out the truth of the matter in these words (De Leg. X):

[To be continued.]

Among the Books

PULLER: "YOUR BOY"

Your Boy and His Training: A Practical Treatise on Boy-Training. By Edwin Puller. New York: D. Appleton and Company. 1916. Price \$1.75

I should like to know the boy who wrote this book. Perhaps I should say, Boy with a capital B, because he is a grown-up man; also, and incidentally, he is a scout master. He has retained the spontaneous, quick, open mind of the boy, while adding to it the mature reasoning power of the adult. Most important of all, he has kept in contact with the viewpoint of the boy, and, in consequence, has been enabled to solve the problem of fair dealing which is, to put yourself in the other fellow's place. Funny how a boy will accept any amount of bullyragging and abuse, but, how he will resent anything that is unfair. Boys are the most democratic persons in the world.

But, to come back to our mutttons, we doubt whether anybody (excepting possibly the creator of "Penrod"; and, of course, Tom Sawyer himself, or, Mark Twain) ever has succeeded so fully in understanding and in knowing the mentality and the psychology of the boy as has the author of this book. Moreover, he has actually succeeded in making the cub (as he is prone to be designated by affectionate sisters, also by uncles and maiden aunts) a likable young citizen whom to train and whose mind and character to develop appears as an attractive task.

We've read somewhere what someone has said, that, if they could be brought to life again, aged, say, seventeen all boys should be slain at the age of nine or thereabouts. That was the attitude when we were youngsters ourselves; but, we have changed all that. Instead of insisting that the boy should live up to a man's ideals and according to a man's way of thinking, especially our own, we have tried to learn, and are still learning, the workings of the boy's mind. Instead of forgetting the more or less time past—dimmed by many experiences and difficulties of the struggle for

existence—and our own thoughts and feelings when we were boys, we are trying our best to remain boys, or, at least to remember what we thought and how we felt once ourselves.

That Mr. Puller has succeeded so eminently in his true understanding of the boy's nature, is the reason why his book on the boy and his training is so attractive and stimulating reading; why it is so alive, engaging and holding one's attention to the end; why it makes one think and ponder and causes one to put his advice into practice forthwith.

The manner in which the author has dealt with his subject can be reviewed briefly by saying that he never forgets the necessity of fair dealing and the need of common sense in one's relation to the boys. That, in fine, is the sum and substance of the book. I wish I could persuade every father, every mother, and every doctor to buy it. They would be quite sure to read it through after having perused but a few pages. It is a splendid little book and deserving of great popularity.

DERCUM: "REST AND SUGGESTION IN MENTAL DISEASES"

Rest, Suggestion, and Other Therapeutic Measures in Nervous and Mental Diseases. By Francis X. Dercum, M. D., Ph. D. Second edition. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$3.50, net.

This treatise was, in its first edition, contributed by Doctor Dercum to Solis Cohen's "System of Physiologic Therapeutics"; for the present publication, however, the text has been largely rewritten and revised. It concerns itself with the problems presented by the exercise of function, with rest, and with the various fatigue-states, while emphasis is placed upon simple physiologic methods of treatment, such as, rest, feeding, and psychotherapy. Concerning psychoanalysis, which today is in the limelight of therapeutic procedure for certain maladies, the author hardly is enthusiastic

He asserts that Freud's method does not, as the latter maintains, dispense with hypnotism, and finds that the cures secured by its means have the same unreality as those achieved under hypnotism. Some physicians may find occasion to quarrel with the inferential objection to hypnotism, or, perhaps, suggestive treatment. However, each one will have to take individual position in matters that are so difficult of definite demonstration. Dercum's book is full of interesting things and also of valuable suggestions.

LELEAN: "SANITATION IN WAR"

Sanitation in War. By Major P. S. Lelean, R. A. M. C. With an Introduction by Surgeon-General Sir Alfred Keogh. With 54 illustrations. Second edition. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$2.00.

One of the timely books that are of unusual, living importance at the present day, is this handy volume before us which presents the subject as taught in a series of lectures at the Royal Army Medical College. In it are incorporated the results of experience in sanitation on active service. The successive chapters discuss the subjects of physical fitness for war; anti-typhoid vaccination; the march; sickness in the army; the role of insects in war; medical organization, administration and duties in the field; conservancy in the field; some new departures in field sanitation; water and water-supplies. The book is handy in size, well written and well printed. Being essentially practical, it is entitled to a place among the relatively few books that the medical officer can carry with him on active service.

"INTERNATIONAL CLINICS"

In the third volume of *International Clinics*, of the 27th series (1917), the importance of focal infections for the etiology of iridocyclitis is considered by Professor de Schweinitz; the management of surgical patients who are victims of secondary anemia is discussed by Dr. Stuart McGuire, and Doctor Grulee has an excellent article on the cause and treatment of constipation in infants and young children. Further, there is an instructive study of arterial blood pressures with reference to their clinical values; Doctor Landis relates his

experiences and observations in the matter of food inspection in Cincinnati; in short, there are found in this volume many splendid contributions on a great variety of important and urgent subjects.

The outstanding feature of the fourth volume is the number of important clinics that occupy almost two-thirds of the text. Some of these deal with military surgery, others with fractures, dislocations and similar surgical conditions, while there are also clinics on ureteral calculi, multiple neuritis, blood pressure in pregnancy, besides other topics.

A particularly helpful article is one by Gordon J. Saxon, entitled "Some Food-Facts for War Time Consideration." This article contains a very full and serviceable list of foodstuffs, the caloric value of 5-cents' worth of the different substances being indicated. It is also pointed out that the mere caloric value of a substance is not the only criterion of its usefulness. While this value is low in certain vegetables, such as spinach, lettuce, celery, these materials, nevertheless, serve an essential purpose in stimulating the secretion of digestive juice. Altogether, this article on food-facts will repay careful study.

International Clinics is a quarterly published by The J. B. Lippincott Company, of Philadelphia, each volume (cloth-bound) being sold separately at the low price of \$2.00. The publication is a remarkably meritorious one, the series comprising authoritative treatises on virtually all the problems of the modern medical disciplines.

"PROGRESSIVE MEDICINE"

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Philadelphia: Lea & Febiger, December, 1917. Price \$6.00 per annum.

In this volume of *Progressive Medicine*, the practitioner will be interested especially in the "practical therapeutic referendum" contributed by H. R. M. Landis. This review of therapeutic progress, occupying 90 pages of text, contains many interesting and valuable annotations on articles that have appeared in current literature. Not only are many useful drugs discussed, but, also other therapeutic procedures, including

questions of diet. We are reminded, for instance, that 12 double peanuts equal 100 calories in food-value, and that an ordinary-sized ripe banana supplies the same number of calories. This review by Landis alone should be sufficient to repay the careful study of the successive numbers of *Progressive Medicine*.

FISHER: "CATARACT"

Cataract: Senile, Traumatic, and Congenital. By W. A. Fisher, M. D. Chicago: Chicago Eye, Ear, Nose, and Throat College. 1917. Price \$1.50.

This little book is essentially intended to describe the author's operation for cataract, and, of course, is addressed particularly to ophthalmologic surgeons.

JOHNSON: "MUSKETS AND MEDICINE"

Muskets and Medicine or Army Life in the Sixties. By Charles Beneulyn Johnson. Philadelphia: The F. A. Davis Company. 1917. Price \$1.50.

This is a bit of personal and national history, taking us back to the war between the States. The story of the author, who entered the Union army as a young man and soon was attached to the medical service, very naturally engages our interest, because it is related from the point of view of a physician. The book is well deserving of a place in the physician's leisure-library.

"GOD'S MINUTE"

God's Minute: A Book of 365 Daily Prayers, 60 Seconds Long, For Home Worship. By 365 Eminent Clergymen and Laymen. Philadelphia: The Vir Publishing Company. 1916. Price 35 or 50 cents, according to the binding.

While no printed prayer can always present the individual soul-wants, yet some of the most effective prayers are the printed ones. Those by the Psalmist have been appropriated by many who found in them the spiritual expression of their soul's inmost needs.

It might be argued that a medical journal hardly is a medium for announcing or discussing a book of prayers, still, there is no good reason why it should not be. It may be true that, as a class, physicians are

not very good church-people; for all that they are deeply religious. It can not be otherwise. Their studies, their experience make them so.

Besides, it is peculiarly fitting at the beginning of a new year, and the more so at the beginning of this particular year, to speak of a book containing prayers for each day; for, it is a fact that the whole world in general is returning to the religious sentiments of the fathers, or, at least, that people are becoming more devout. As a soldier recently said to the reviewer, "One thinks pretty seriously if the order to go abroad may come any day."

So, we have no hesitation in announcing this book of prayers and in commending it to the attention of our readers. The prayers given for each day are expressions of the soul speaking to the Divine. There is no particularism in them, no specialism, no even "religion." The prayers indicate solely the desire of the soul to come into closer contact with God, and thus to receive guidance, aid, and uplift for the work of the day.

HILL AND ECKMAN: "STARVATION TREATMENT OF DIABETES"

The Starvation-Treatment of Diabetes With a Series of Graduated Diets. By Lewis Webb Hill, M. D., and Rena S. Eckman. Third edition. Boston: W. M. Leonard. 1917. Price \$1.25.

The so-called Allen treatment, or starvation treatment of diabetes, has found several able exponents, in the brief time since it was first promulgated, whose ample clinical experience supports the justice of the principles upon which the method is based. The present guide, which first was published in 1915, and the second edition of which required two printings in 1916, affords substantial aid to all who have not had an opportunity to work out in detail the progressive series of diets that should be used after the starvation-treatment. These diets were worked out by Miss Eckman, who is head of the diet-kitchen at the Massachusetts General Hospital. We are under the impression that this little volume makes a splendid supplement to the latest and at present most authoritative treatise on diabetes maladies, namely, the one by Joslin, which was reviewed in this journal in July, 1917, page 536.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6354.—“Pituitary Gland and Blood Pressure.” V. C., Missouri, desires to know whether the anterior pituitary lobe is capable of raising the blood pressure. “In the literature at my disposal, he says, “I am unable to find any reference to its effect on blood pressure.”

The anterior pituitary lobe exerts no influence whatever upon the blood pressure, although enormous doses possibly may produce a slight fall of pressure in the guinea pig. The literature on this subject is, as yet, very meagre; indeed, much has yet to be learned regarding this organ and the active principle, tethelin, of the anterior lobe.

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QUERY 6355.—“Removal of Superficial Nævus.” J. E. H., New York, wishes to know how to remove birthmarks. “The patient, an infant six months old, has a small brown spot on one cheek of the size of one-half silver dime. There is no elevation of skin, just the brown spot, but the parents want something done. Will sodium ethylate do the work?”

We would advise that you leave this skin-blemish alone for a while. It is quite possible that it may disappear, though Stelwagon states that after the third month these spots are likely to lose the disposition, often noticed before that, to spontaneous or easily provoked disappearance.

There are three satisfactory methods of removal; namely: Pressure, electrolysis, and puncturing with a needle or sharpened stick charged with nitric acid. In many cases, but very slight impetus is needed to start the process of involution. Occasionally a single application of salicylated collodion will cause desquamation and disappearance of the spot. Also, repeated and

thick paintings with collodion, continued for some days or even weeks, will prove effective. (Compression.)

If obstinate, the pressure-method may be combined with discrete puncturing; that is, with an ordinary or, better, triangular-edged needle, slightly break up the tissues within and then, with due aseptic precaution, immediately apply the collodion. Such local disturbance gives rise, when pressure is continuously exerted, to more or less plastic exudation, agglutination, and gradual obliteration of the growth.

The present writer would suggest that you try such methods before resorting to electrolysis or applications of sodium ethylate or other caustics. You will find this subject thoroughly covered in any modern work on diseases of the skin.

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QUERY 6356.—“Neurasthenia of Pelvic Origin.” A. L. B., Nebraska, is treating a farmer's wife forty-three years old and mother of three children, the youngest twelve years of age. He writes:

“Fourteen years ago, the woman had a miscarriage, got up on the second day and stacked grain, and has not been well since. She is now very nervous, has ‘rushes of blood’ to the head, trembles at the least excitement, and often flies into an ungovernable rage. She seems to control herself better when away from home, but, often weeps for imaginary reasons. She is well nourished, in fact, has to diet, to keep from putting on fat. She has never been in bed on account of her ailments or had a physician for her confinements. She suffered much when, after the miscarriage, the last child was born, two years ago.

“Her blood pressure is 130 and examination of the urine reveals nothing ab-

normal. Two years ago, she complained of always having been constipated, nervous, and that her back was aching continually. Her uterus was found to be tipped slightly to the right.

"Of all the uterine tonics and symptomatic treatments, corpus luteum does the most good, seeming to relieve everything but the backache. She had a curetment six months ago, without affording relief. At the time, the surgeon said the lower border of the cervix was inflamed.

"What I want to know is, whether removal of the ovaries would cure her, or whether shortening of the ligaments or fixation of the uterus would do any good. My opinion is that she has cystic ovaries."

If a woman has a cystic ovary, it is quite certain that shortening the ligaments will not prove curative, but, at operation, the existence or absence of such cysts would be definitely ascertained.

The fact that this woman is approaching the climacteric renders it especially desirable that the disequilibrium of the nervous system be overcome, and, in order to accomplish this, the fundamental cause must, if possible, be recognized.

Pelvic depletion by the use of glycomagnesium suppositories, followed by copious hot douches, may improve conditions considerably; and a few small doses of blue mass and soda every third night for a month, with a laxative saline every other morning on awakening, together with some such sedative as viburnum, in alternation with the valerates of quinine, iron, and zinc, with scutellarin, might be tried with advantage.

However, considering the history, it is more than possible that normal conditions will not reobtain until the pelvic organs have received direct and, perhaps, surgical attention.

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 QUERY 6357.—"Trophoedema. F. N. H., Texas, desires diagnostic and therapeutic suggestions in the case of a woman (forty-three years of age; 5 feet, 9 inches; weight, 140 pounds) who, some two or three years ago, by Chicago physicians was declared to have diabetes. She was put on an appropriate diet, and to this lived up regularly for nearly two years, recovering entirely from the condition.

About twenty-eight months ago, she was suffering from an attack of grip, and,

after this was cured, her right foot and ankle became swollen, this condition some evenings extending to the knee if she has walked much during the day. Her urine contains no sugar or albumin, but, colon-bacilli, streptococci, and staphylococci were found early. The cystitis finally disappeared and there has been no more complaint in this direction. The heart, liver and kidneys are in good condition; her appetite is good and indigestion rarely complained of. Her abdomen is free from any tumor. The veins of the legs reveal no mechanical obstruction.

"When first the foot and leg's swollen state was observed, elaterium in 1-6-grain doses was given, till she had forty-two watery stools, without, however, noticeably affecting the condition. Hydragog cathartics have been prescribed time and again, likewise without reducing the edema. Of course, it is less mornings, by about 1-2 to 1 inch at the ankles."

It is probable that you are dealing with chronic trophoedema, also called Milroy's disease, in a persistent edema of a portion or all of one limb. In this disorder, however, there generally are present other neuropathic symptoms, the swollen limb pitting on firm pressure and a chronic swelling leading to the development of a mild degree of elephantiasis.

Acute attacks sometimes occur, in which the limb becomes swollen, tense, and red. The patient may then exhibit rigors, pyrexia, and abdominal pain and vomiting. The edema of the limb diminishes if the part is kept elevated, though it never disappears entirely. Of course, in making a diagnosis, all other causes of edema must be eliminated.

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 QUERY 6358.—"Infantile Paralysis or Rachitis?" J. S. H., Tennessee, has a boy patient, two and one-half years of age, of good family history, who can not yet walk, although he is normally developed and nourished, and sleeps well. Only, he does not get on his feet. "He can 'scoot along' back downward, on his hands and feet, but can't stand alone or fails to try. His legs are in proportion and it seems that he ought to have the strength to walk. He can not or will not raise himself up in any way, except that he can slightly raise his head. The father thinks that for the last two months he has ceased to

grow. Early in infancy, he thinks it possible that the boy had meningitis or poliomyelitis, although he did not have a physician. At the time for the boy to begin walking, the parents began to note his muscular inactivity and sought medical aid." The mother and father are normal and healthy. There is no tuberculous or syphilitic taint so far as can be traced. Our correspondent asks: Would electricity and massage be good, and what therapeutic agents should I use?"

It is very difficult, in many cases, to differentiate between rickets and poliomyelitis, for, the muscular symptoms of rickets are almost as constant and characteristic as those of the bones, and quite frequently rachitic children are unable to sit erect, stand or walk at the proper age. Late walking is one of the most common symptoms for which advice is sought by parents of such children. In 151 cases in which the date of walking was investigated by Holt, only 27 (18 percent) of the children walked before the fifteenth month; 47 percent were not walking at the eighteenth month; 20 percent, not at two years; and 10 percent, not at two and a half years.

The muscular power in the extremities sometimes is so feeble as to suggest paralysis, and in a number of cases even the most expert diagnosticians are unable to differentiate rickets from poliomyelitis, except by electrical reactions—those in rickety subjects usually being normal or exaggerated. In other cases, the symptoms may suggest cerebral palsy of the flaccid type. Inasmuch as here no distinct lesions of the muscles have been demonstrated, the symptoms probably are the consequence of imperfect nutrition. Of course, the history in this case is rather suspicious.

We must also consider the possibility of cerebral hemorrhage. In the milder cases, the early symptoms may be overlooked and nothing excite suspicion until the infant is six months old. There is then muscular weakness, the child does not sit up or even hold up its head when the trunk is supported, and there may be observed a tendency to stiffen the body and to throw the head backward, owing to spasm of the cervical or spinal muscles. A closer examination will usually disclose some rigidity of the extremities, particularly of the legs. As the child grows older, other symptoms of imperfect development become more and

more evident, and there will be observable arrest of development in the paralyzed limbs, which are smaller and shorter than normal.

We would suggest, doctor, that you go into this matter very thoroughly, make a careful study of the child, then report your findings.

In the meantime, massage of the affected extremities and faradization of the spine ought to prove beneficial. We should be inclined to administer the phosphates of iron, calcium, potassium, and manganese, together with nuclein. Inunctions of cacao-butter might be given with advantage.

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QUERY 6359.—"Annulus Migrans." F. T. W., Wisconsin, is treating a neurotic man of thirty-five, who has a "geographic tongue," annulus migrans. The condition has persisted for many years, and the patient "has worn out the patience of many physicians." At present, there is starch-indigestion, besides various other troubles, owing, probably, to nervous dyspepsia. The man is on the verge of nervous breakdown, due to worry—"cancerophobia," the result of the condition of his tongue.

It is very difficult for us to prescribe intelligently for a neurotic individual presenting this condition, without possessing a very much clearer idea of the conditions underlying.

The mere fact that this man has been under the care of many competent physicians without having received any benefit points to the existence of some obscure basal pathology. Indeed, the precise cause of these transitory benign plaques of the tongue is not known. As you may be aware, Fournier classes annulus migrans as among the indirect consequences of syphilis—as one of the parasymphilides. Other competent observers (Stelwagon among them) hold that it is in no way related to syphilis; Unna, in fact, had patients who contracted syphilis after this disorder had appeared, and he considered it a disorder of trophoneurotic origin. However, most observers consider gastrointestinal disturbance as of main etiologic influence.

It must not be forgotten, in this connection, that a fungus discovered in one case closely resembled the trichophyton, and that in several instances such tongue-spots have

been observed in association with ringworm patches on the skin.

It is very essential, of course, to differentiate this disorder from leukoplakia. This, though, should not be a matter of great difficulty, because of the superficial character, well-defined outline, with the reddish, sometimes desquamating central portion, and the usually grayish or yellowish border of the lesion, which marks serve to differentiate it, not only from leukoplakia, but, from syphilitic mucous patches, aphthae, and other patches. The rapidity of the formation of this disease and the capriciousness and its recurrence also are of diagnostic import.

Unfortunately, pityriasis linguæ—another synonym—while benign, is generally persistent, though a careful supervision of the dietary and the maintenancy of a therapeutically clean digestive tract often exert a material influence.

Arsenic is, unquestionably, of value. We should not hesitate to give this patient injections of sodium cacodylate or the arsenates of iron, quinine, and strychnine, with nuclein, in rather full doses. We should also give him, after meals, diastase and papain and, every second or third night, small repeated doses of calomel and podophyllin, followed by a laxative saline the next morning.

A myrrh and boric-acid mouth-wash may be prescribed, but, perhaps the best results will follow the application of sulphur to the lesion. This writer has employed, with great satisfaction, glyceropaqueous solutions of ichthyol. Besnier makes applications of boric-acid ointment (vaseline base) containing balsam of Peru.

A very thorough physical examination of this patient should be made, and the feces, urine, and blood submitted to a competent pathologist, for examination.

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 QUERY 6360.—“Aneurysm of Aorta.” R. S. C., Arkansas, writes: “I have a patient with a marked aneurysm of the arch of the aorta and should like to have you outline

some procedure that would lengthen the woman's span of life. I was thinking of putting her on a water-bed.”

Very little can be done for a patient with a pronounced aneurysm of the aorta. Veratrine may be given, to lower the tension, and calcium iodide or potassium iodide may be tried, the former, in our opinion proving most useful, as a rule.

To relieve pain, opiates may be necessary, although croton chloral sometime will meet the requirements satisfactorily. In certain cases, ergotin proves of service also, hydrastine hydrochloride, which exerts a constricting influence upon the arterial walls, has its uses.

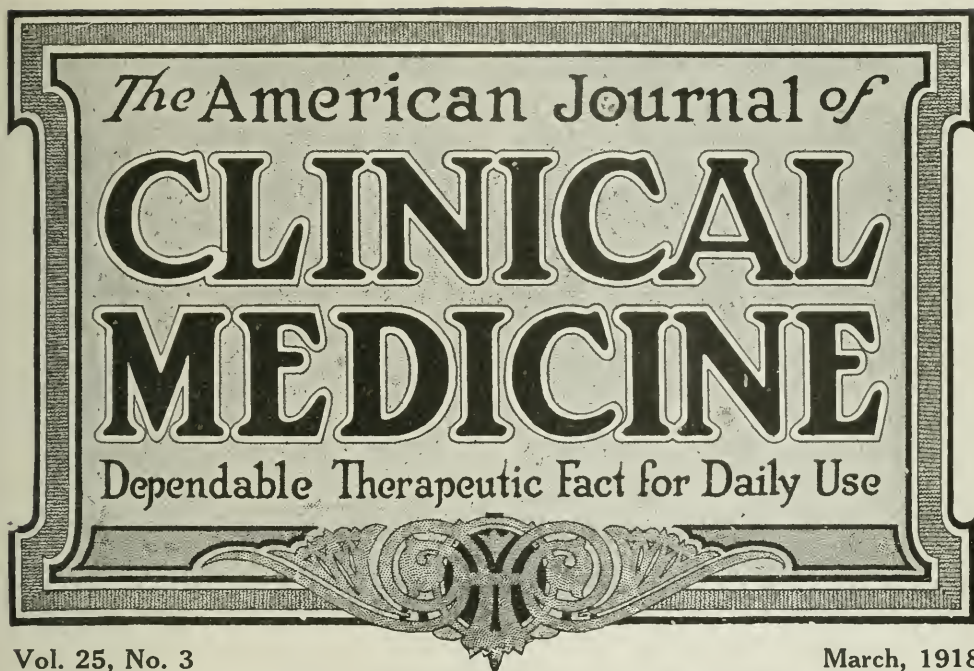
Much depends, of course, upon the characteristics of the aneurysmal change. The most common form (the saccular) may prove particularly troublesome, owing to pressure. The dissecting aneurysm may, as you are aware, persist for years without causing very marked disability. The third form, due to weakening of the coats of the aorta, causes the ascending portion of the arch to dilate uniformly.

There may be more or less pressure upon the vena cava, thus causing engorgement of the vessels of the head and right arm. Very small aneurysms of the transvers arch, if growing backward, press upon the trachea or esophagus and occasion paroxysmal cough or dysphagia, respectively. A very small aneurysm from the lower wall of the arch may compress a bronchus, producing bronchitis, bronchiectasis, and, finally, suppuration in the lung, resulting in death.

Thus, we have aneurysms producing very slight symptoms and those causing a variety of grave conditions. The treatment must, of course, be directed to relieve those symptoms that give the patient most distress. The primary condition can not be regarded as amenable to treatment, even when, as so often, it is of syphilitic origin.

The water-bed, of which you speak, can be obtained through any surgical-instrument house.





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On the Nature and Curability of Carcinosis

IN an article on malignant growths (*Jour. Ark. Med. Soc.*, Nov., 1917), Dr. A. Wilson Hale deprecates the custom of differentiating between benign and malignant growths, believing that both will prove dangerous to life in time. Especially is it a mistake, in Doctor Hale's opinion, to put off patients that have asked for an opinion regarding some small growth, advising them to let it alone, not to permit operation or treatment, lest it be "scattered through the system"; perhaps, in addition, ordering some kind of ointment.

Would it not be better, asks Doctor Hale, to advise our patients to have removed completely, and at once, every condition that may lead to a very unhappy termination in the years to come if let alone or if only mildly tampered with? He condemns the habit of medical men to delay operating upon growths that do not show clearly malignant tendencies. Indeed, he is strongly inclined to include, for the purpose of radical treatment, with the malignant growths

or cancers in the dormant, inactive stage, all so-called tumors of whatever variety and however small; all growths either symmetrical or irregular, no matter of what size; all nodules, elevations or lumps appearing at any age; all moles and all warts; all ulcers or sores upon any part of the body that are not specific or of known infection, which do not heal in normal time or which extend upon the application of certain medicaments or even if left alone.

The diagnosis thus being made simply to depend upon the presence of any abnormal growth, the treatment advocated by the author consists in the early removal of any and every such lesion, the removal being done either surgically or by means of escharotics. While the use of the knife is the best treatment for all internal growths, either the knife or escharotic applications are applicable to surface growths.

It must be admitted that such a sweeping procedure, that of removing all growths at as early a time as they are recognized,

naturally would be quite inclusive and would affect those neoplasms that actually are malignant in character and ultimately would prove fatal.

Unfortunately, we are, by no means, assured that a simple innocent-appearing nodule, wart, mole or other growth, as a local expression of carcinosis, is the only manifestation of the cancerous diathesis. While we do not know either the cause or the nature of cancer-disease and while most studies undertaken with a view to elucidating it have led into the impasse of operation as the only salvation without an alternative, it must not be forgotten that experienced clinicians and keen observers have given it as their opinion that cancer, or carcinosis, as a systemic disease—even at an early period and with a localization anywhere on the body—in the form of a tumor or growth, does not signify that the rest of the body is entirely well. On the contrary, it is probable that there exists some perversion of the "humors" or of the tissues and that even the removal of a seemingly inoffensive localized growth will not exterminate the disease and will not prevent recurrence of the lesion.

If it is true, as claimed, for instance, by L. Duncan Bulkley, in his book on cancer, that there is some deep-rooted constitutional cause of cancer which baffles recognition, but, which must have to do with the diet or mode of living of those afflicted, a simple operation, no matter how early, manifestly cannot be sufficient. On the other hand, if it is possible to bring about constitutional changes, local manifestations of cancerous disease may be made to disappear without operative interference. Indeed, Doctor Bulkley has observed cases of undoubted cancer, verified by competent surgeons, and who urged instant removal, which entirely disappeared, without an operation, under the course of treatment instituted by himself, the subjects remaining in perfect health for now many years, in two instances for even as long as sixteen.

In discussing his views concerning the causes of cancer—a recognition of which is a primary condition for successive treatment—Bulkley lays stress upon diet, elimination, metabolism, et cetera. For instance, he attempts, in cases of cancer, by means of selective diet and drugs, to keep the urinary acidity at a little below normal,

as it has been shown that in this disease the blood exhibits a constantly increasing tendency toward diminished alkalescence, or, as wrongly designated, increased acidity.

Further, imperfect intestinal elimination is constantly observed in cancer-cases, the history of this state being almost invariable, even before the first appearance or the suspicion of the cancer. Hence, Bulkley can not help but feel very strongly the possibility that the toxins produced by the millions of microorganisms generated through intestinal stasis and fecal putrefaction, play a real part in the production of that blood dyscrasia which culminates in the formation of malignant newgrowths.

Further, in the saliva of cancer-patients, the reaction is found to be acid almost invariably until corrected by dietary and other treatment.

All these things point to the idea that the medical aspects of cancer loom up pretty large, even though only a beginning has been made to study the disease in these directions. At any rate, it may be asserted with confidence that cancer is not primarily a surgical affection and that the mere ablation of an offending portion of the body that has become diseased never can preclude a new portion from becoming affected or prevent a recurrence in the same location. Indeed, surgical experience is to the effect that there often seems to occur a stimulation by the trauma and by the deranged lymphatic and vascular circulation, caused by the operation, which results in the dissemination of actively growing cancer-cells through these channels.

This has a bearing with reference to the procedure still indulged in by some surgeons and even recently encouraged by the New York commissioner of health, to remove portions of suspected lesions for examination. Such a test operation can not be condemned too strongly, for, it is almost unavoidable, in case malignant disease actually exists, that cancer-cells thereby are carried to other parts of the body through the lymph-channels, and that thus a further localization and outbreak of the disease is encouraged.

The outstanding feature, in comparing the two publications referred to, is the fact that surgery is helpless with respect to carcinosis: it removes the evidences of the

disease, but, can offer nothing to prevent a recurrence, which usually takes place promptly. On the contrary, Bulkley's investigations have caused him to assume a distinctly encouraged attitude and have, at least, led to certain conclusions that must stimulate further studies and investigations, while justifying his belief in the constitutional nature of carcinosis, as a corollary of which stands out the possibility of remedying the constitutional fault by a constitutional amendment or improvement.

While we agree with Doctor Hale, that every abnormal growth should be viewed with suspicion and with the possibility of its being cancer, it is to be kept in mind, in our opinion, that such an event should prove an occasion for a careful systemic and constitutional study of the patient, and of persistent and painstaking regulations of his habits, his diet, his elimination; measures for which excellent guidance will be found in Bulkley's teachings. His results, such as they are, are so positive that they well may be made the basis of further investigation; and, we believe, this investigation should be clinical, in order to produce acceptable results.

He who loves not his country can love nothing.
—Johnson.

A PATRIOTIC SERVICE: A TRUE INCIDENT

'Twas a brilliant winter Sunday, following the late heavy snowfall, in a Western city where my friend and I were travel-bound over the week's end. The thermometer outside was several degrees below zero, and all the morning we hugged the comfortable hotel lobby. The church bulletin board, hanging on the office wall, announced a special afternoon service at the Episcopal Cathedral, with a patriotic sermon by the bishop; and, as we were both keen to see for ourselves to what pitch the patriotism of the West was keyed, we braved the cold and went to church.

We walked through huge embankments of piled-up snow, which had not yet had time to become soiled and was sparkling white in the afternoon sun. When we reached the cathedral the service had already begun; the people were kneeling at the general confession. Inside there was no dazzling white light but soft purple twilight

that filtered in through the stained-glass windows. The building was filled to its capacity; the sort of well-bred, genteel audience that one is accustomed to see in an Episcopal church, with a fair sprinkling of soldiers in uniform; and a full vested choir. A service flag hung over the chancel.

The officiating clergyman read the shortened evensong service; and over it all rested the atmosphere of quiet decorum and dignity that is also characteristic of the Episcopal ritual. In the pause before the hymn preceding the sermon, the bishop himself—an old man, I should say about seventy-five, with white hair but a still vigorous body and a strong, alert face—came to the front of the chancel, and said that he wished to read a letter which had been written fifty-four years ago, by this church, to the boys who had gone out from its walls to the civil war. I learned afterwards that the old bishop himself had been one of the boys.

It was just such a letter as a church might write and as churches are writing all over the country to the boys at Camp Grant, and Camp Wheeler, and the rest of the camps. You know the kind of things that it said. The church was proud of its soldier boys and would think of them and pray for them and cherish them and stand loyally behind them; and if any of them should fall in battle for the cause, their names and stories would be emblazoned for ever on the tablets of the church and in the deepest hearts of those for whom they had died; and so forth, and so forth. It was well written and well read, and every line had a thrill and a heart-throb in it without being in the least mawkish. Before the old bishop got through, I, for my part, had swallowed hard on my throat more than once; and, while there was no outward sign of effect upon the well-behaved congregation, I can hardly doubt that the letter had stirred something underneath their calm exterior.

According to the service bulletin board, hanging just outside the chancel, the next item should have been the singing of hymn No. 561; but, the organist evidently had caught the inspiration of the old bishop's reading, for, he broke immediately into the Battle Hymn of the Republic. And, believe me he *played* it! You could hear the trumpets sounding, and you knew that they would never call retreat; you could feel the

evening dews and damps on Flanders field; and when he came to the last verse (for, he played every verse, and there was no need for words) you could see the summer wind sweeping across the lillies—don't tell me that you can't *see* wind, because that's exactly what I did do.

From the Battle Hymn of the Republic he swung, without a pause, into "Illinois," then "Fair Wisconsin," then "Maryland," finishing up the galaxy of State songs with dear, quaint old "Dixie Land"—and, believe me again, a man has to be an artist to play "Dixie" on a pipe-organ in an Episcopal cathedral. Never have I seen such a succession of emotions pass across an audience. First they were stunned; then aghast; then, I think, a little scared. But, he got them at last by the most consummate piece of patriotic art that I have yet seen achieved. Throwing his organ wide open, he began to thunder out "America," and brought the congregation to their feet.

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing.

Then a sudden and complete stop; and, with his hands on the choir manual,—sweet, soft, far-away, the antiphon of America, so that it seemed to be just a continuation of it, he played,

Home! home! sweet, sweet home
There's no place like home;
There's no place like home.

Right in front of me, I saw a young giant of a soldier put his arm around his mother's waist and shamelessly squeeze her up to his side; further than that I could not see, because I confess that my eyes were not in condition to see further.

One more *coup-de-maitre* the wizard at the organ had in store; throwing on again the full power of his organ, he repeated the refrain of "Home, Sweet Home," but, this time, Oh this time he did not play alone. Every man, woman and child in the great cathedral that could make any sort of a noise with his throat helped to swell the tremendous chorus.

When the last notes had died away, the old bishop came quickly to the front of the chancel.

"I do not think," he said, simply, "that it will be necessary for me, now, to preach a sermon." Up went his apostolic hand.

"Now unto Him that is able," and so forth. And we were dismissed.

As the choir filed out of their seats, not even singing a recessional, I caught a glimpse of the organist, on his organ stool, and I saw that he was quite a young fellow, a typical Western American, clean-cut, wholesome, alert. Then my friend and I found ourselves outside again, in the cold sunshine, dazzled by something else beside the white snow.

We talked long about that patriotic service after we got back to the hotel. We agreed that such an inspiring affair undoubtedly would result in many enlistments. At last we asked, both of us together, a question that had troubled us both a little.

"How is it that this man who can inspire such fire of patriotism in everybody else—he is a young man—how is it he does not enlist himself?"

The question had hardly left our lips when the organist himself came in at the hotel door. He limped across the lobby with the help of a cane; one of his legs was fully four inches shorter than the other, and horribly twisted.

Breathes there the man with soul so dead,
Who never to himself hath said,
This is my own, my native land!
Whose heart hath ne'er within him burn'd,
As home his footsteps he hath turn'd,
From wandering on a foreign strand!

—Scott.

THE JEW AND THE SLAV

From the American Jewish Committee of New York City, we have received a slender volume entitled, "The Jews in the Eastern War-Zone." This volume contains data regarding some of the innumerable hardships visited upon this unfortunate people during the earlier years of the great war. The account stops before the great German drive which overwhelmed Poland and neighboring provinces of Russia proper. It cites, therefore, no information in regard to the condition of the Jews under German control or of the Russians since the overturning of the autocracy.

The account which it gives is credible only when we realize the medieval conditions of things persisting to the present in that part of Europe. Of the fifteen millions of Jews, one-half of the number dwell in the war-district. It is a long and shocking list, and, yet it necessarily must comprise but a small portion of the wrongs in-

flicted upon this unhappy people by the Slavic races among whom they are living. The account does not impress us as being overdrawn. We are told that every item it contains is quoted from official, not Jewish, sources. Nevertheless, we must say that it is a one-sided presentation. As we reach the end of the one hundred and twenty pages, we ask ourselves, What would the other side have to say about this? For, rest assured that, as with every other question, there are two sides to this one.

From beginning to end, this is a jeremiade; and, as in all the publications we ever have read in this direction not a scintilla of attention is given to the important question that necessarily comes to the front—Why? There must be a why.

For every phenomenon there is an adequate cause; and we ask: "Why is there this brutal, murderous antipathy to the Jewish race?" This antipathy certainly appears to exist wherever Jews form an appreciable percentage of the population, and it appears to be the more intense the larger this percentage. Russians and Poles detest each other heartily, but, they unite in persecuting the Jews. Roumania persecutes the Jews and violates her pledges to the powers that guarantee her freedom, by refusing citizenship to this people. Even in France, where the proportion of Jews in the population is but slight, we witness such anti-Semite outbreaks as the Dreyfuss case. In England, Judaism does not seem to excite a like antipathy or to debar its members from access to the highest positions. We scarcely need allude to the position of the Jews in America; still, realizing what it is, we may the better study the causes of this same anti-Semitism. Among the Mohammedans, this prejudice is very much less; partly, we presume because of the intimate blood-relations between the Children of Israel and the Sons of Ishmael; also on account of the closer similarity of religion; yet, when war loosens the constitution of society there, we find the same unrelenting cruelty exhibited by the Turk toward the Jews as that which he metes out to his unfortunate Christian subjects.

What, after all, is the matter with the Jew?

A Jew (or Hebrew, as some prefer) is a separatist, to begin with and that means something. He always is prepared to advocate the interests of any other Jew in

his dealings with a Christian. Indeed, many of us may remember the day when this same consideration contributed largely to the anti-Masonic excitement rampant in the days when Masonry was openly denounced as a conspiracy against the rest of the community that were not Masons. That the prejudice in any way rests upon the Jews' participation in the Crucifixion, we well may doubt when we look out upon the so-called Christian world and see the slight regard paid to the teachings of Jesus.

The Jew has been termed cowardly, yet, no more unjust accusation was ever leveled against the race. Here, in America, where no restrictions are placed upon these people, where no law is in existence which discriminates between Jew and Gentile, the former is anything but a coward. When a company of our soldiers were fighting off an overwhelming force of Indians, from their refuge on a sandbar in the bed of a western river, nobody kept up the spirits of the men so effectually as a little Jew, a private in the company. If ever the prize-ring produced a concentrated bundle of grit, it was Barney Aaron; and Battling Levinsky is but one of many Jewish pugilists, not one of whom has ever been known to show the white feather.

Developing in this land, without the slightest restriction, the peculiarities by which the Jew has been recognizable gradually fade away, and we foresee the time coming within the present century when the remark about anyone being a Jew will be received with about the same casual indifference as when we are now told that some one is a Baptist, or a Democrat, or a Hoosier—it is a personal matter with an individual, about which we do not concern ourselves.

In trade, the Jew is said to be tricky; but, if there be any trick which any member of this race has practiced that is not existing commonly among his Gentile fellow citizens, it has escaped our notice. Moreover, this is especially the land where the legal maxim of *caveat emptor* rules. Following the tenets of Jefferson, we feel that it is up to every man to watch out that he doesn't get cheated, and, if he does allow himself to be overreached in a business deal, he is greeted with derision rather than sympathy.

It seems to us, therefore, that it is up to the Jew himself to study the reasons for

his unpopularity among the Slavs and to turn his superacute intellect upon devising means for removing this prejudice. We rather suspect that mercantile overreaching has its influence, and that the Jew, cunningly taking advantage of the stupidity of the simple Slav, fails to realize that every injustice committed by himself adds to the hatred felt by his duller-witted neighbor, the sting of personal resentment. Nevertheless, the conditions under which the Jew lives among the Slavs are such as go far to justify his seizing upon any opportunity presenting itself for overreaching what he considers his enemy. Whether this is worth while in the long run, every Jew would do well to ponder deeply.

The whole book impresses us as a tremendously powerful argument in favor of the Zionist movement. A Jewish Palestine, providing a home under his own rule and the means of livelihood therein, opens to every Jew living under conditions as described in this book a refuge. Such a refuge there should be, and also the means rendering it available to every Jew who desires it.

One other thought is impressed upon us, by the history of the great Slavonic aggregation since the dethronement of the Czar. The very greatest obstacle that could be raised against German interests and German commercial propaganda would be the diffusion of those fifteen millions of Jews among the Russian population, without the slightest restriction to hamper their development. With Jewish finance, manufacturing, banking and commercial matters in general, counting fifteen millions of Jews, there soon would be very little inducement offered to German enterprise. Looking at Russia's history for the past year, we should say that there is nothing the nation needs so much as the haven that would be supplied by those millions of Jewish brains.

Happiness? If a man isn't happy on \$1,500 per year he will never be happy on \$15,000 per year.
—Claude C. Hopkins.

DISEASES IN CAMP

In the May number of CLINICAL MEDICINE, we intend to say something about the epidemics of measles and of cerebrospinal meningitis that have prevailed in some of the training camps. These are important subjects and we want to hear regarding

them from everybody who has something to say. So, please, sit down and write promptly and concisely, and tell us of your experiences.

HAVE YOU THOUGHT OF THE NURSE?

A little article appearing in *The New York Post* sometime ago will bear repetition, for the reason that the point raised in it is so fully justified. It runs as follows:

"She was one of the Indianapolis delegation of nurses who are shortly to leave for the front. She was slender, blonde, a girl of the type whom you would imagine had not been face to face with serious things the greater part of her life. She stood for a moment at the curb in the shadow of Washington Arch as her unit broke ranks yesterday, and, watching advancing waves of white-robed women, she said:

"I have heard of prayers being offered for soldiers who are going to the front. The papers are filled with stories of comfort-kits and tobacco-funds and woolen sweaters and socks. It's fine, and, yet, I've been wondering."

"Wondering what?" answered a woman who stood at her side.

"Well, no one speaks of offering prayers for the nurses. Yet, the mortality among nurses is not low, they tell me. We are going to the other side to risk our lives. Personally, I should love to think prayers are going up for me while I'm on the sea in a transport and while I am in the field hospitals.

"And we are going to need comforts, too. There will be many hardships for us—that was all explained to us when we went in for this. That is all right. Duty without hardship would be as nothing. Yet, I wonder whether people are going to think of us over there. Think of us as in need of woolen garments and prayerful thoughts and other things that soldiers of mercy—for, that is what we are—need as well as the soldiers who are bearing rifles. People haven't thought of this, I suppose. It's a new idea to me, frankly. I've been thinking about it all day."

We, too, are wondering how many people have thought of our nurses in active service as standing in need of things for themselves, just as much as they are supplying the needs of the soldiers. They are soldiers, too, for that matter; they need all

the praise and devotion and encouragement and honor that are meted out to the warriors, themselves. Possibly more.

So, when we talk about the soldiers and do all in our power, to encourage them and to help them, let us not forget the nurses. Let us tell them that we appreciate their work and their devotion and patriotism and that we honor them as much as we honor the other fighters, that is, those in the trenches, and in the air, as well as those on board the ships.

A man or woman who thinks that he or she is sick
—is sick.

—Dr. John Inglis.

THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS

The first national society that was founded for the purpose of investigating the many problems of tuberculosis and the discovery of means for reducing the frequency of this serious affliction of the civilized world was established in France through the efforts of Professor Armaingaud, of Bordeaux, in 1891. Only one year later (1892), the Pennsylvania Society for the Prevention of Tuberculosis was founded, and in the succeeding years of that decade similar societies came into being in almost every civilized country.

Although much excellent work was accomplished in the United States with reference to the problem of tuberculosis, it was not until years later that the National Association for the Study and Prevention of Tuberculosis came into being, this holding its first meeting in 1905 in the city of Washington. Although being younger than many of the other national tuberculosis societies, the National Association has, since 1905, led a vigorous and fruitful existence and is justified in looking back with satisfaction to thirteen years of constructive work accomplished.

To cite only a few of the most important undertakings of the National Association, it may be mentioned that it organized and conducted in 1908, at Washington, the Sixth International Congress on Tuberculosis; an undertaking that stimulated and promoted the entire antituberculosis movement in America.

It started the first traveling tuberculosis exhibit, and continued it for eight years,

from 1905 to 1913. It was this exhibit that demonstrated to state and local antituberculosis associations throughout the United States the value of this method of education and resulted in the creation of thousands of similar exhibits.

It published the first national standards of diagnosis and classification of tuberculosis (1906), which have been used continuously in this country as a basis for reporting upon results of sanatorium and dispensary treatment.

It promoted the Red Cross Christmas Seal from a limited sale of less than 30,000,000 seals in 1910 to over 200,000,000 seals in 1917.

It printed and distributed educational leaflets, posters, and booklets on tuberculosis aggregating several million copies.

It established the *American Review of Tuberculosis*, the only strictly scientific medical journal on tuberculosis published in the English language. In its first year of existence, *The Review* has made for itself an enviable place among the scientific publications of the world.

There are many other undertakings which the National Association initiated with a great deal of success, and it has demonstrated its right to existence and the immense importance of its activities for the welfare of the American people. All this work was accomplished by a membership of only about 2,500.

When it is considered that the tuberculosis problem virtually affects our whole hundred million of population and that it not only is a subject for the consideration of physicians, but, has its sociologic and economic aspects that affect the laity closely, it should need no great eloquence to convince people that this association deserves wide and material support and encouragement. The Association hopes to increase its membership by 5,000, and there is no reason why its roster should not come up to the 10,000 mark. Not only physicians, but, also laymen who are honestly interested in the control of tuberculosis and who are not engaged in enterprises foreign to the ideals of the Association are welcomed to membership.

Membership in the National Association, which entails annual dues of \$5.00, not only promotes the work and the means for work, but, it carries with it various publications

that are written in popular language and are of general interest. In addition to this, the members are entitled to a reduction in the subscription-price for *The American Review of Tuberculosis*, a journal that should be studied by every general practitioner and by every physician who comes in contact with tuberculous disease in any form or localization.

We are publishing in this number a communication from the assistant secretary of the National Association, Mr. Philip P. Jacobs, on the military antituberculosis program. If it were only for the sake of aiding in the carrying out of these plans, which not only are necessary, but, certain to be productive of great good, many persons, whether physicians or laymen, should be induced thereby to apply for membership in the National Association. Application may be made direct (105 E. 22nd St., New York, N. Y.) or we shall be glad to act as intermediary in this matter. It will also give us pleasure to give any specific information on the National Association that may be desired.

How easy it is to assume that God is on our side when the market is going up.

—Bruce Barton.

WAR SAVINGS STAMPS

The National War Savings Committee was appointed by the secretary of the treasury, Mr. McAdoo, for the purpose of enabling the great mass of Americans, that is, those of small means, to make simple and secure investments, promising profitable returns, and by the aggregate of which the government will receive the use of some of the large sums that are required for the conduct of the war. The war savings stamps have been designated "little baby bonds," for the reason that they are issued in denominations as low as 25 cents and up to \$5.00. The \$5.00 war stamp can be purchased during March for \$4.14, the price increasing by one cent every month, and, on January 1, 1923, they will be redeemed at their face value; this representing an investment at 4 percent compound interest.

Not every man, woman or child can frequently spend \$5.00, or, rather, the lower sums designated for the purchase of a full war savings stamp; but, it is possible for most of us to procure occasionally a "U.

S. Thrift Stamp" at the price of 25 cents, which may be pasted on a thrift card, while when 16 such stamps have been affixed, the thrift card may be exchanged for a \$5.00 stamp at any postoffice, bank or other authorized agency, by adding 14 cents in cash, prior to April 1, 1918, and one cent additional for each month thereafter.

This is a splendid way of saving and at the same time of assisting the government in its serious work. Not only is it patriotic, but, it has a tendency to instil habits of thrift—which, as a nation, we are greatly in need of. We wish to encourage the habit of buying thrift stamps and war savings stamps, and hope that all our readers will speak of the matter to their wives and children, urging them to participate in this splendid investment.

MOBILIZING THE PROFESSION FOR WAR

Not until the entire medical profession of the United States, or at least those who are mentally and physically fit and within the age limit, are mobilized within the Medical Reserve Corps of the United States Army, can we give the Surgeon General that efficiency which is so essential for him, in that he needs a large body of medical officers upon whom to draw.

You may never be called for active service, Doctor; but, by joining the Medical Reserve Corps now and placing your services at the command of your country, you clearly manifest the patriotism which the medical profession, as a whole, should evince and which must become active if we are to win the war.

Every doctor must realize that success depends upon a carefully selected and thoroughly trained body of medical officers. By careful selection, we mean, the placing of each medical officer in that position where he is best fitted for the service, and only by having an immense corps or the entire medical profession mobilized upon a war basis, can we serve our country to the best possible advantage.

This mobilization of the entire profession should come from within the body itself. Every physician coming within the requirements of the service, as to age and physical fitness, should seriously consider this suggestion, and he should not wait for complete mobilization, but, apply at once

for a commission in the Medical Reserve Corps of the United States Army.

It is not only for the combatant forces in Europe that medical officers are required but for sanitation, hospital camps cantonments and in other departments where the health and life of the forces are dependent upon the medical officer.

We have within the profession a sufficient number of doctors to fully meet the requirements of the Surgeon General's Office whatever they might be. To be of service, you must be willing to meet the appeal that now is being made for a large and efficient Medical Reserve Corps upon which the Surgeon General may draw as requirements demand.

Enthusiasm is the element of success in everything. It is the light that leads and the strength that lifts men on and up in the great struggles of scientific pursuits and of professional labor. It robs endurance of difficulty, and makes a pleasure of duty.
—Bishop Doane.

SHALL WE SUBMIT?

You have heard it said of the gentlemen who are sent to Washington to make our laws that they are "servants of the people." This saying has its origin in the political speech of a well meaning congressman rather than in the condition which actually exists.

The public, as a rule, has but little direct influence on legislation, in fact, it has but a speaking acquaintance with national issues debated in Congress and this only through the press.

This is a deplorable condition, for which the people themselves are largely to blame. We send our legislators to Washington with fireworks and speeches. Our ardor then cools and Mr. Congressman is soon forgotten about and left largely to his own devices. Your senators and your congressmen need your suggestions and counsel from home. In many instances they seek this advice and welcome letters from their constituents.

The public *can* control legislation. It is their privilege and within their power to do so. It is our duty to interest ourselves in, and encourage the making of just laws, as well as to condemn and fight against the passage of unjust measures which are prepared either through ignorance or selfishness. Public sentiment once awakened is far more effective than the highest priced "lobby" that ever invaded our national cap-

itol. Which preamble brings us to the real point of this editorial. May this introduction serve to awaken our subscribers to get in touch with their senators and congressmen at Washington, at once requesting the defeat of the zone-increase in second class postage rates.

Last August the Senate adopted the McKellar Amendment to the War Revenue Bill, which provides for increases in magazine postage rates from one cent per pound to six cents a pound, according to a zone classification. July 1st, 1918, is the date set for these new rates to become effective unless revoked in the meantime. Objection to this ruling on the part of publishers, and the reading public, is not because of the fact that a war tax has been levied on the distribution of periodicals; the reason for the widespread protest is because the method adopted is prohibitive and unjust to those who reside any considerable distance from publishing centers. Should physicians in California, in Washington, in Texas, and in other western states be compelled to pay six cents and more per copy for postage on their favorite medical journal when it was formerly delivered to them for one cent and will continue to be delivered for one cent to physicians within 300 miles of the city of publication?

Periodical-readers, the subscribers themselves, will be asked to pay this increased cost of magazine postage. Should one section of the country be cut off from their magazines by prohibitive rates while another section, more favored because of geographical proximity to the center of the magazine industry, continue to secure these journals at the old rate? A flat rate of 2 cents a pound would be not objected to on the part of publishers, even though this is an increase of 100 per cent. This would be a pretty stiff increase considering the ever growing expense of labor, production and letter postage. Still, Congress, arbitrarily, and without thorough knowledge of conditions, yes, even in the face of a report by the Hughes Postal Commission "denouncing the zone system," proposes an advance of 600 per cent for carrying magazines over 1,800 miles with proportionate increases for lesser distances.

Such a law, in operation, would throttle the wide distribution of scientific, literary and business publications. It would be a serious blow to the liberal education of the

people through the periodical press and this at a time when this education is most needed. The country must be welded together inseparably in these days of national peril. The Zone System applied to magazine distribution would have exactly the opposite effect. Such action would tend to isolate one section from another and provincialize them. During the past fifty years the publishing interests of this country have done more to cut down sectional barriers and unify public thought than any other single agency. Must this important industry now be set back fifty years and old sectional lines again be permitted to rise up?

Strangely enough, few local newspapers have interested themselves in this vital discussion because of the fact that they are not affected by this law. Indeed, they profit by this discrimination against the periodical press. This question is up to the American people to decide. It is up to you, Doctor, for your decision now. Will you submit to this imposition, or will you ask your congressmen and senators at Washington to give the periodical-publishers of this country a square deal?

We predict that your action in writing to Washington will do much to influence a repeal of the proposed zone rates as applied to magazines and periodicals.

A cure by suggestion is as real as a cure by surgery. As a distinguished clergyman has said, "Christian Science is a real cure for imaginary disease and an imaginary cure for real disease."
—Dr. John Inglis.

PROFESSOR REMINGTON IS DEAD

Prof. Joseph Price Remington died at his Philadelphia home January 4. Doctor Remington is the last of a group of unusually strong men who constituted the faculty of the Philadelphia College of Pharmacy. No chemist in the United States stood higher in the estimation of his own profession and in our own. If he could have endowed the entire body of pharmacists with the knowledge, the skill, and the principles he possessed, then, indeed, we might have had an ideal pharmacy that would have justified the position demanded for it by Engelhard and others. Doctor Remington took a prominent part in the revision of the Pharmacopeia as chairman of the committee for more than a quarter of a century, and will be sorely missed in this department of his activities. His idea of securing a

better standing for the pharmaceutical profession was that of rendering such an advance justified by an increase in the qualification for its individual members. This interested him much more than the securing of such a standing by legislative enactment. We extend our hearty sympathies to pharmacy on her great loss, and trust that his place may be filled by a man whose qualifications approximate his own.

TETHELIN AS AN AID IN SURGERY

Several months ago Dr. T. Brailsford Robertson, of the University of California, published an account about tethelin, the name of a substance isolated by him from the anterior lobe of the pituitary gland and which, as he found, stimulates bodily growth. While the literature concerning tethelin is not, as yet, extensive, enough has been discovered to demonstrate that it is capable of profoundly influencing certain physiological processes.

According to recent press dispatches, it appears that this pituitary principle has proved remarkably successful in causing wounds to heal promptly after for months or even years having refused to yield to approved treatment. Accordingly, Doctor Robertson, who had acquired patent rights in this valuable new substance, donated these rights to the University of California for the exploitation and employment of tethelin, with the proviso that the profits resulting from the discovery are to be applied for the benefit of an endowment fund the income of which is to be utilized for medical research.

It is said that tests made with tethelin in army hospitals in Europe and in civil hospitals in America have shown it to be useful in the treatment of wounds, in that it promotes healing, particularly in cases where the vitality of the tissues is impaired.

It is sincerely to be hoped that these reports are based upon facts. Hitherto it has been possible in ordinary surgical practice to keep wounds aseptic and in emergency surgery, especially in war surgery, to practice an efficient antiseptic technic; however, nothing has been known that could restore function. If it is found that tethelin can devitalize tissues and reestablish their exert such an influence, even the very great cost of the remedy will not stand in the way of its extensive employment.

Leading Articles

Arteriosclerosis: Its Cause and Cure*

By GEORGE LENOX CURTIS, M. D., New York City

ARTERIOSCLEROSIS, according to Dunglison, is "an increase of connective tissue, leading to thickening of the walls of an artery; induration of the musculo-elastic coat of arteries." It is popularly known as hardening of the arteries.

For perhaps a century or more, this condition has been generally understood to be progressive and incurable. And even college lecturers and authors of recent articles and textbooks continue to follow the teachings of their predecessors, without adding anything material to our definite knowledge of the subject. Is it any wonder that, with only the tyranny of the dead for our guidance, progress is slow?

General information of the cause of, and actual conditions prevailing in, arteriosclerosis, as well as of the means for their eradication, appears to be the same now as it was in years past. The malady is too often regarded as incurable or else the treatment is merely palliative. Other diseases have been scientifically investigated and accurate knowledge concerning them has been acquired. One by one, perplexing conditions that destroy life are discovered, ways and means for their relief determined, so that, ultimately, we may hope to see that all diseases may be thoroughly understood and effectively treated. Yet, few diseases have been less scientifically studied than has arteriosclerosis. So, the old theory of "no cure" continues popular. Therefore, it is with the hope of stimulating helpful discussion on this subject that I desire to present a few radical ideas concerning the etiology and treatment of sclerosis.

The Etiology of Arteriosclerosis

The cause of the hardening of the blood-

vessels is most generally held to be an accumulation of calcium carried in the blood and deposited on the lining surface and walls of a vessel, thus narrowing its lumen and lessening its flexibility. Recent observations, however, show this theory to be incorrect. They prove that the hardening of the vessels results from fat that has found its way into the blood and eventually into the lining membrane and walls of the vessel itself. But, the disease that causes this excessive fat deposition as well as the degenerative cause itself usually is lost sight of. However, the disorganizing substance is readily seen in the blood by the aid of the microscope, as will be shown further along.

When fat is present in excess, it gradually infiltrates the walls of the blood-vessels, causing them to become more and more unyielding and in time so fragile and brittle that, like an old rubber garden-hose or a gas-tube, they can be easily ruptured.

This completed degeneration is fairly well illustrated by a piece of fat pork which, when exposed to the atmosphere, oxidizes and becomes hard and of calcareous consistency. Blood-vessels, under certain conditions, become similarly affected; hence, the sclerosis.

This condition may readily be detected by sensitive and trained fingers, as the sclerotic vessels will be found to have lost their elasticity and even may crackle under pressure. It is at this stage of the degenerative process that particles of the hardened lining membrane exfoliate, find their way into the smaller vessels and plug them, thereby affording an opportunity for the accumulation of fibrin, leukocytes, detritus, et cetera. If the plugged vessel should be surrounded by bony or ligamentous walls, there may be no rupture and

*Read before the American Electrotherapeutic Society.

but slight permanent damage may follow, as the embolus may be absorbed and the passageway be reestablished. But, should the obstruction occur in a less unyielding part—for instance, the liver, lungs or brain—the vessel may break, the surrounding area become surcharged with blood, and traumatic abscess, pneumonia or apoplexy may result in consequence.

When the vessels become so degenerated as to lose their elasticity, the stomata, which allow the passage of the blood-cells and other nutrient substances into the surrounding tissues and *permit disease to be carried into the blood*, also lose their power to refuse or even to cast off the fat-cell and finally become plugged. As a consequence, general disintegration from lack of cell nutrition follows.

All the conditions responsible for the presence of fat in the blood may not yet be known, still, sufficient data have been collected to warrant the belief that syphilis and the excessive use of alcohol (and it is right here that heredity plays such an important part in arterial degeneration) are the principal factors.

Fortunately, true arteriosclerosis is rare. I find that it occurs in only 2 percent of the many cases so diagnosed that have been referred to me for treatment during the past nineteen years. False arteriosclerosis, however, is common. It comprises fully 98 percent of my cases.

In the treatment of this condition, as in all diseases, the psychological effect of any advice given to the patient should be carefully considered, for, once alarm is conveyed or a hopeless prognosis made, the retarding influence upon recovery by no means is easily checked.

False Arteriosclerosis, and Spinal Adjustment

False arteriosclerosis is nothing more nor less than abnormal fullness of the blood-vessels, which become so distended that they resemble the fire- or garden-hose with a small nozzle when under pressure. This condition, popularly speaking, is known as high blood pressure. It is almost invariably due to a greater or less degree of congestion somewhere along the blood-circulatory system. And, obviously, the nearer the seat of congestion is to the central pumping station, the greater the pressure. So, "arteriosclerosis" is stated to be cured

by eliminating the congestion—an achievement that can, usually, be accomplished.

When this arterial congestion is of long standing, the nerves closely associated with the vessels involved may become paralyzed and thus inhibit the flow of blood. This condition is met with most frequently when the spinal accessory nerves leading to a congested area are inflamed and the vertebrae between which they pass are displaced sufficiently to press on and inflame them. The most effective means for relieving this congestion is, by means of skilfully applied chiropractics, with the aim of adjusting misplaced or subluxated vertebrae that impinge upon the nerves supplying magnetic or nerve force to the vessels leading to these parts; whereupon, normal nerve supply and blood circulation being restored, the congestion disappears.

When one realizes that through the nerves that connect and vivify them the various organs of the body are as sympathetically interrelated as are the centers or units of an electric system, we can understand how the normal action of one part intimately depends upon the normal action of another part, or that, when one part is out of order, a portion of or even the entire system may be deranged.

Therefore, all possible means to restore circulatory equilibrium should be employed, and while the spine is being jacked into normal relations other troubles should also receive attention.

This derangement not infrequently is owing to inflammation in the brain or in the spinal cord, the exact location of which can be determined by passing a finger of one hand firmly over the head or spine, or other parts of the body where disease is suspected, while the other hand holds an electrode attached to an ozone-generator capable of developing from one to five million volts of current.

This current, which passes directly through the body, ignores resistance, under normal conditions. If there is no abnormal condition, the patient is insensible to its application, providing, however, that there is no space between the finger and the skin; in the other event a disagreeable prickling under the fingers will be felt.

Should pain be elicited, it will be found to be owing to inflammatory products, which afford resistance to the passage of

the current; and, in proportion to the extent of the pain, the area and the density of the inflammation can be determined.

When the inflamed area involves nerve-centers, the organs or parts of the body to which these nerves are distributed will be found, in proportion to the amount of pain experienced, partly or completely out of commission. For example, in hemiplegia.

The Therapy of False Arteriosclerosis

In treating congestion, the ozone-electrode will be found most efficient adjunct treatment, for, it quickly revitalizes the nerves, oxidizes pathogenic conditions, dissipates congestion and thus enables the parts to function physiologically, and helps body, blood and mind, to become clear, clean, and normal.

This method of treating disease, when augmented by other practical means, such as the electric-light and ozone-cabinet (which induces general relaxation, rapid and profuse perspiration, stimulation of the glandular system, and increased circulation), zone-therapy, physical exercise, saline cathartics, aromatic spirit of ammonia, and sodium bicarbonate (for quickly neutralizing acid intoxication and dissolving fibrous obstruction), and regulation of the diet, so that former conditions may not recur, will, in the course of two or three months, cure false arteriosclerosis.

Administered in large doses, ammonia has a dissolving influence on the fats and phosphates; while ozone and the other agents reconstruct the entire system. If reasonable hygienic care is thereafter observed, the patient will stay well.

This treatment is also indicated in true arteriosclerosis and will cure it in the early stages. In fact, in well-matured cases of arteriosclerosis, I have, by this method, observed decided general improvement, even though there were no permanent cures. Needless to say, that in these cases no violent or even vigorous exercise should be indulged in.

All fatty and gas-producing foods and drinks, such as alcoholic beverages, carbonated waters, cream, creamed dishes, butter, sweets, beans, apples, turnips, and beef-juice are interdicted. Also salads—which are insufficiently masticated and allow of air being swallowed in the loose mass—as well as strongly acid food should be avoided because of their gas-producing qualities.

The diet should be light, nourishing, and easily digested, and may consist of cracked wheat, rye, corn, whole wheat and graham bread (no white bread as it lacks cell-salts), gluten, meat, poultry, fish, vegetables, and nuts. Large quantities of water should be drunk, to flush the system thoroughly. Coffee, tea, chocolate, also tobacco, because of their toxic, fattening, and false stimulating influence should be avoided. Physical exercise—tennis, golf, swimming, woodchopping, and life in the woods, to vivify normal activity and vitalize muscles and nerves; hot baths, to induce perspiration and to stir sluggish circulation; and the development of the air passages, in order that the respiratory passages may be adequately oxidized, are all helpful.

Eyestrain should be corrected; tooth, rectal, gall-bladder, uterine, sexual and other complications should receive attention; and, for an hour once or twice daily, the patient should be exposed to the light, heat, and general ozonation of the ozone-cabinet.

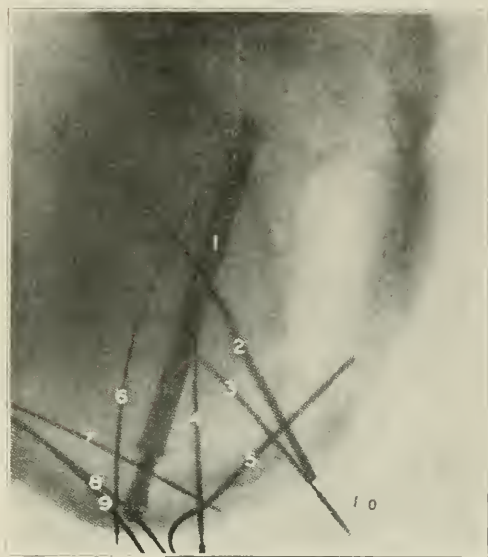
Accessory Causes. Diagnostic Aids

Diseased teeth are responsible for so many reflex inflammatory conditions—such as neuralgia, neuritis, rheumatism, pyemia, and septicemia—that I feel strongly that they are definitely related to false arteriosclerosis. Diagnosticians and practitioners would do well to have a report on the condition of the teeth and alveolar process of every sclerotic patient. This should be made by a competent dentist, preferably by a specialist in surgery of the mouth and radiography.

Chronic proctitis is another condition that frequently stands in *loco parentis* to hardening of the arteries. Proctitis is the most common cause of colitis, constipation, diarrhea, and intestinal autointoxication, all of which conditions have a profound effect upon the blood-vessels. Added to the chronic self-poisoning from the foul gastrointestinal canal, we have absorption into the system of a large amount of inflammatory exudates from the local disease.

Rectal channels result from proctitis. They usually form near the upper part of the rectum following inflammation, the secretions forming a pocket, when, by gravity, a channel is formed, which in time makes its way to the anus, where the membrane usually is sufficiently resistant to pre-

vent opening through and forming a fistula. I have seen as many as eleven channels in one rectum into which we passed probes



Through courtesy of A. B. Jamison, M. D.

Fig. 1. Radiograph showing probes in channels.

and injected bismuth before radiographing. (See Fig. 1.) Several of the channels led



Fig. 2. Showing fat-globules in the blood.

to bayous some of which held as much as 8 ounces of toxic fluid, which was constant-

ly being absorbed by the system. These channels can be opened and healed with but slight operation or inconvenience to the patient.

The accompanying micrograms are of freshly drawn blood. In the inked circles are seen fat-globules. In Figure 2, the globules show quite clearly. The globule is sometimes covered or mingled with other

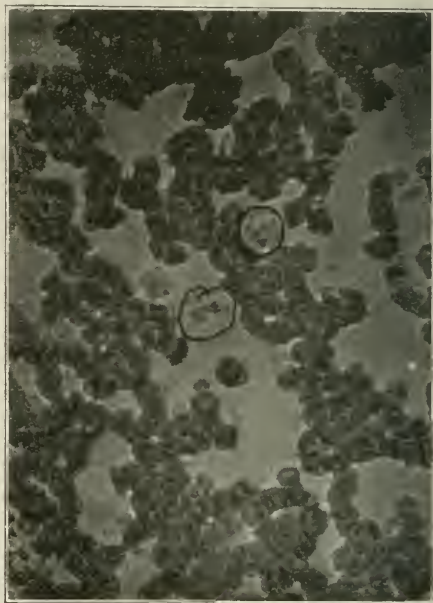


Fig. 3. Ferments mixed with fat-globules.

products, such as mucous phosphates, fibrin, corpuscles, et cetera (as seen in Figs. 3 and 4), and may be overlooked by one untrained in finding them, or, the serum may be cloudy, this dulling the globule.

Both of these conditions are found in the blood when arteriosclerosis is present. Free fat may also be found in the blood of persons with a fatty liver, fatty kidneys, syphilitic degeneration, and in excessively fatty persons who do not digest or assimilate their intake of fat. Fat globules can not always be clearly seen, but when they can be seen, they are of an opalescent shade. When mixed with other substance their definition is difficult. Analysis shows that anthrometous tissue of sclerotic cases is composed mostly of fat and phosphates, which cause the artery to lose its flexibility.

Possibly the details of a characteristic case may not be without interest. Five years ago, Dr. J. V. Hemstreet, of Herki-

mer, New York, brought me a patient who was on his way home to die. This man



Fig. 4. Specimen of "Cloudy" serum. Difficulty in distinguishing fat-globules.

had a blood pressure of 220, and had had it for many months. He was, practically

helpless, frequently cyanotic, and entirely hopeless. Many of the best medical men in America had confirmed him in this hopelessness (for, he was very well to do, needless to say, and had received practically every form of treatment that money could buy—except mine).

I gave him that, in the ozone-light and heat-cabinet. Twice daily, for two weeks, he was ozonized. At the expiration of this time, his blood pressure was reduced to 130, and he was able to dress and wait upon himself. He continued these treatments, taking them only daily, for four weeks. After this, he returned to his home in Burlington, Vermont. This was five years ago.

The man still remains well—attending to his business every day.

This is only one of more than 150 cases, some of which were brought to me in even worse condition than this man. Several, I remember, had Cheyne-Stokes breathing most of the time they slept. And not a single one of all this number has died from blood-pressure conditions.

The technic of the method is simple, the apparatus is not complicated, and the results far transcend any other method of treatment with which I am familiar.

Chlorazene Dressings for Carbuncle, After Excision

By E. A. REEVES, M. D., Kansas City, Kansas

ON August 8 last, there came under my care a man afflicted with a carbuncle on the back of his neck. The patient, a motorman 46 years of age, with a short, fat neck and weighing more than two hundred pounds, had been forced to quit work ten days before, on account of this painful sore. Inspection revealed a huge necrotic area of the diameter of the top of a teacup.

I incised the affected area freely, then swabbed out the pockets, as thoroughly as was possible, with tincture of iodine diluted with an equal volume of alcohol. Unable to stop the spread of the infection by this method, and the patient becoming septic and his condition growing worse, it was decided to excise the carbuncle; and this was car-

ried out, under ether anesthesia, on August 23, in Bethany Hospital.

The patient was in poor condition and took the anesthetic badly. After the operation was finished, there was a crater extending almost from ear to ear and from 2 inches up under the hair down for at least 7 inches—in fact, large enough to have covered an ordinary pie-plate. Owing to the condition of the patient and the extent of the diseased tissue, not all of it could be removed. After the crater had been packed, the patient was put to bed.

Subsequent treatment consisted in dressing the wound twice a day with a solution of chlorazene 1-2 percent strength, and saturating the under dressings with it every

two hours. Besides, where the sloughs were deepest, the dry chlorazene was powdered directly upon the wound once a day.



Fig. 1. One week after operation.

Photograph No. 1 was taken about one week after operation; No. 2 was taken ten days later; No. 3, about three weeks after



Fig. 2. Taken ten days after first photograph.

the excision, this view showing the extent of the sloughing, where gauze was packed

clear down behind the sternocleidomastoid muscle. The wound became clean without the appearance of any odor and at that time presented a clean, granulating surface, without discharge worth speaking of, except where the sinus shows below, where it was incised and drainage of a pocket procured that had buried down below the main wound for about 3 inches.

On September 17, I put twelve Thiersch skin-grafts over the upper and right side of the wound, and fourteen more on September 2; this making twenty-six grafts, all taken from his arms. Only one of these skin grafts failed to grow, although at the same time pus was discharging freely from



Fig. 3. Taken three weeks after excision.

the sinus below and saturating the lower dressings.

The same dressing with chlorazene was continued. The patient's appetite came back, his temperature dropped to normal, and on September 26 he left the hospital. After that, the dressing was being done at his home until October 8, when he came to my office, once a day, to be attended to. He was dismissed on November 10, and returned to his work. The enormous crater was well filled out, while there was much less scar-tissue than anyone who saw the conditions had expected.

The only other treatment administered was 20 mls (Cc.) of mixed-infection phylacogen, in addition to supportive treatment and plenty of nourishing food.

Personal Experiences with Neuritis

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

THE editor not long ago suggested that an article on neuritis, based upon my own case, ought to prove instructive and interesting to the readers of *CLINICAL MEDICINE*, and this is my response to his invitation. At the outset, let me say that I do not feel qualified to write anything especially interesting upon the general subject of neuritis, but there is a certain phase of it with which I, unfortunately, have been painfully familiar during the past five years. While feeling a natural reluctance to obtrude so personal a matter upon the public, I have set aside this feeling, in the hope that my experience may be of interest to my fellow members of the profession, and, may be, through them, of service to other unfortunate sufferers. Had the knowledge, which I have so painfully and slowly gathered during the past five years, been available at the beginning, what an avalanche of suffering I might have been spared. That it was not available, was due to the unusual form of the trouble. Of the dozen or more members of the profession who have made a close study of my case, only one reports having met a similar one—not identical, but merely similar.

For want of a better name, the condition has, usually, been called neuritis; but, while there certainly has been neuritis of certain nerves, yet the principal symptoms have been somewhat different from those ordinarily associated with an inflamed nerve. In ordinary neuritis, there usually is manifested neuralgia, that is, continuous pain, and the nerve is very tender to palpation; however, barring certain minor nerves, I had neither neuralgia nor tenderness. Prolonged neuritis may be followed by paralysis. I have had neither.

The chief feature of my case has been the recurrence of spasms of the most agonizing pain, as a rule brought on by some movement of the limbs or trunk. The pain of these spasms was so great that when they were frequent they produced all the signs of surgical shock, such as weak and irregular action of the heart; while, in the autumn of 1915, when my condition was at

the worst, I was warned by my attending physician that paralysis of the heart was imminent.

Historical

In December, 1912, I began to observe pain and tenderness in both feet when I was walking. Thinking that possibly my arches were letting down, I wore supports for a time, but, without benefit. Gradually the pain disappeared from the left foot, only to become worse in the right one. Then the pain moved slowly up the leg, developing around the knee and in the sciatic nerve. At the end of a year, it was felt most severely in the sacral and sciatic nerves and had taken on more of a spasmodic character. In stepping down off a step, the moment the leg was suspended in the air, there would be a spasm of pain, which was referred mainly to the acetabulum; but, manipulation of the point did not evoke pain or tenderness, such as would have been produced in a diseased joint.

The first severe spasm occurred in January, 1914, while I was on a lecture-tour in Canada. After a chilly night in a cold sleeper, I got out at 6 o'clock in the morning, with a blizzard raging and the mercury at 10 below zero. As I stepped down from the car-step, the moment my right leg was suspended, it was seized with a spasm of excruciating pain and all the muscles, from the waist down, on the right side were powerfully contracted and but for the porter's support I should have fallen to the ground. A mile in a cold omnibus did not add to my comfort, but, after getting warm I was much relieved. By the free use of aspirin, I was able to complete my tour of four days, and, upon returning home, resumed my usual work, although with gradually increasing disablement. On the 25th of March, it took me half an hour to walk the block between the street-car and my house. I could neither walk nor endure being carried, one being as painful as the other. Needless to say, I remained at home. After a month's rest, I was able to walk with crutches, provided I rested my right foot lightly on the ground; to let it

hang suspended, at once produced a spasm. By July, I was able to walk with a cane, and a three-weeks' vacation in the country restored me to comparative comfort; but, with the cold autumn weather, there came a relapse. A course of hot baths, with massage and physical culture, only made matters worse.

In May, 1915, I went to Excelsior Springs, Missouri, where I took the sulphosaline waters for six weeks and sparingly indulged in the mineral baths. I improved considerably, probably because of the rest; for, on my return to the city, spasms came on worse than ever. Lying down aggravated the pains. I scarcely could remain in bed from 11 o'clock nights till morning, and often sat in my chair all night rather than face the horrors of bed.

From July to October, 1915, my physicians tried faithfully to see what drugs could do for me. Salicylates, colchicine, iodides, arsenic, bromides, iron, and a few more, all proved useless, while some of them increased my suffering.

Morphine had been considered, but, not tried. By the middle of October, my condition was such that it seemed as if a fatal termination could not be far off. A dead man has nothing to fear from the morphine-habit, so, I asked my doctor to give it to me—meaning the drug, not the habit. Acquiescing, he injected 1-4 grain hypodermically at 10 o'clock p. m.

The Magic of Morphine's Gift

The effect was a lesson in therapeutics. I went to bed and slept uninterruptedly all night, awaking refreshed and with an appetite for breakfast—for the first time in many weeks. The morphine injection was repeated the next night, and the next. The feeble and irregular heart action began to improve; I grew steadily better in every way. For 105 days, I had my hypodermic injection at bedtime, soon reducing the dose to one-sixth of a grain, then to one-eighth, and, finally, to one-twelfth of a grain. By the first of February, 1916, I was able to go out.

Of course, I felt some misgivings as to whether I could stop the morphine when I wanted to. I had requested the doctor to reduce the dose gradually to zero whenever in his judgment the proper time arrived, not, however, to inform me when the vanishing point had been reached, but to ad-

minister merely plain water for several days. This he did, and I was not quite sure when the last dose of the narcotic was administered. I experienced no trouble, beyond a little insomnia for three or four nights.

Since then, I have twice taken the morphine for an extended period; once for 142 days, with a daily dose ranging from 1-4 of a grain down to 1-8 or less—most of the time using the smaller dose; and once for 95 days a daily dose of one-sixth of a grain. My condition always has improved slowly, but, steadily while taking the morphine, while I lost ground to some extent when not receiving it. In the last forty days of the 142 mentioned above, I took only one-twentieth of a grain each evening, and it was sufficient to keep me comfortable. The hayfever season came during that time, and for the first time in thirty-five years I had no hayfever.

I am well aware that many of my readers will regard me as occupying a dangerous position in this matter, and, indeed, I am not advising a course of action for anyone else—I am simply stating the facts of my own experience. That morphine has practically no bad effects on my system is, of course, very unusual. Even a small dose gives me refreshing sleep, improves the appetite, and imparts a general sense of well-being and energy for work. Two of my most experienced medical advisers have said to me, in substance: "Considering the happy action of this drug in your case, you would be foolish not to avail yourself of its aid. It is simply choosing between a shortened life of suffering and uselessness, and an extended life of comparative comfort and capacity for work. At your age, even if you had to take a little morphine for the rest of your life, where would be the harm? There can be no question that in your case its action is curative."

During the spring and summer of 1916, I was able to walk, although with difficulty. I went out more or less, attending half a dozen obstetric cases in an advisory capacity; someone else did the work. With the approach of fall weather, I lost ground again. By the first of October, I was unable to walk, and have not walked since.

What the Skiagraph Revealed

Early in November, I entered Wesley Hospital, under the surgical service of Dr.

W. E. Shackleton, assisted by Dr. L. J. Pollock, neurologist, Dr. W. H. Holmes, diagnostician, and Miss Brindley, x-ray expert. Nearly a week was devoted to a series of most searching examinations.

As my pain had all been below the waist, a skiagraph was first taken of the lumbar and pelvic regions, without, however, revealing anything. Tests of the blood and spinal fluid gave negative results. In the course of a long and thorough examination, the neurologist discovered that the ninth left intercostal nerve did not respond to what is known as Beevor's test. So, a stereoscopic skiagraph of the thoracic spine was made, and it revealed a lesion at the junction of the ninth and tenth dorsal vertebrae. The alinement of the vertebrae seemed to be perfect, still, the shading of the bone indicated something abnormal. As there were no evidences of Pott's disease, it was concluded that the lesion was an arthritic enlargement, and that this was producing pressure upon the nerves at their exit through the intervertebral foramina.

This being so, the indication would be for extension and immobilization. Accordingly, a plaster-paris jacket was applied. The spasms ceased at once and did not return for many weeks. This seemed to confirm the correctness of the diagnosis that had been made.

The x-ray picture also showed two broken ribs, neither of which had united. These must have been fractured by the violence of the muscular contractions; however, just when this happened, I do not know—my sufferings were so great that the additional pain of a fractured rib or two was not noticeable.

As to the Plaster-Paris Jacket

Now, while a plaster cast is effective so far as the foregoing indications are concerned, it has drawbacks that in some cases greatly minimize its benefit. To enumerate:

1. Its great weight is exhausting to the patient.
2. Its rigidity permits absolutely no expansion. Thus, the eating of a meal, the drinking of a glass of water, the presence of gas in the stomach, each made me feel as if I were in a vice. I would sit for hours gasping for breath, with my heart running wild from the pressure.
3. I soon began to suffer from pressure-

neuritis under the arms and in the intercostals.

4. When I was lying in bed at night, while the cast relieved the old pains, it substituted others almost as bad.

5. When a cast is new, it fits snugly, but, soon becomes loose, because pressure and lack of exercise cause absorption of adipose tissue and shrinkage of the muscles. This permits some movement of the spine, so that, in my case, there was a partial return to the spasms.

I wore a succession of casts during seven months, however, so great was the discomfort that my general condition ran down very much. I lost my appetite and became emaciated, nervous, and melancholy. Many times a day I would say to myself, "I simply can not endure this any longer."

The Advantages of an Extension Corset

In the meantime, I was revolving in my mind the question whether it would not be possible to devise an apparatus that would give the desired support and extension, while being free from the drawbacks of a cast. I planned a jacket that was, in substance, a corset that would rest on the iliac crests and apply extension under the armpits, with steel stays at the back, shaped to the natural curves, to support the spine. When I had about completed my plans, I discovered, through an advertisement, that an apparatus almost identical was being manufactured by the Philo-Burt Manufacturing Company, of Jamestown, New York. After a thorough investigation I determined to give this apparatus a trial. My medical advisers were inclined to doubt whether it would be sufficiently rigid and feared that it might permit a degree of mobility that would defeat our object. Still I had reached a point where I would about as soon die as endure a plaster cast any longer. So, I said to them: "Gentlemen, I have had an advantage over you during the past seven months, in being able to study plaster casts from the inside as well as from the outside, from the standpoint of the patient as well as from that of the doctor. As I am, life is not worth living, and I shall not be satisfied until I can try an adjustable apparatus."

On the 18th day of June, of last year, I went into the hospital, had the cast removed and measurements taken for the con-

templated corset; and now I can relate that, in about a week, I was comfortably ensconced in the contrivance and have enjoyed the relief and comfort it afforded ever since, while in the meantime improving steadily. Today, I feel as well as I ever did in my life and can do any work that can be done from a wheel-chair. There is still much lameness, but, the condition of the legs is steadily improving and there seems to be a fair probability of my being able to walk before long.

The advantages of a flexible apparatus over a cast, in spinal troubles, are:

1. It is light—less than 2 pounds as against 10 to 15 in a cast.
2. It is cool in hot weather.
3. It is sanitary—permitting bathing daily, instead of every two or three months.
4. It can be taken off at night, if desired.
5. It is adjustable, hence, it always fits snugly, instead of becoming loose, as does a cast; while, on the other hand, it need never be uncomfortably tight after a full meal or when the stomach is distended by gas.

6. It furnishes the same kind of extension as does a cast, namely: the weight of the upper part of the body is supported from the hips by lifting up the shoulders. Pressure neuritis under the armpits is not likely to occur; while, if it should, it is more readily relieved.

This extension is, of course, the essence of the whole matter. The one thing that aggravates a diseased spine is, the weight of the upper parts of the body. Relieve it of this weight, and the slight bending permitted by a flexible jacket is of little importance. Indeed, a cast that has become loose actually permits more movement of the spine than does an elastic jacket that fits snugly.

Food, Exercise and Work

Three other factors in my recovery remain to be mentioned, food, exercise and work.

From the beginning of the trouble, I soon learned that my comfort depended largely on a wise selection of food. The pain and lameness are promptly aggravated by eating red meat, especially beef. Equally obnoxious are sour fruits (grape-fruit, lemons, sour oranges, sour apples, sour cherries, and vinegar). Newspaper-writers on medical subjects often assert that fruit-acids are converted into alkalis in the stomach; how-

ever, my own experience and that of many of my patients does not bear out this theory. Eating half a grape-fruit at breakfast will greatly increase the acidity of the urine before noon.

To maintain a maximum of comfort, I select my diet from the following: Bacon, mutton, and chicken, very sparingly; fish, oysters, and eggs; cauliflower, string-beans, lettuce, asparagus, celery, turnips, potatoes, all freely; peas, baked beans, sweet-potatoes, sparingly; berries, muskmelons, canteloupes, sweet cherries, peaches, all freely; all the grains, with butter, cream, and milk, freely. Coffee and cigars in moderation are not objectionable; leaving them out for prolonged periods produced no benefit, while using them produced no harm. Sorry, I can not please the reformers, but, I must tell the truth though the heavens fall.

A person unable to walk must find some other way of taking exercise or he will inevitably run down in general health, because both appetite and assimilation of food will be impaired. I have, therefore, devised for myself a set of physical exercises that I can use sitting in my chair, and, the benefit has been very marked.

I exclude all those muscles that are supplied by the affected nerves, because exercising them aggravates all the symptoms. Three times a day, I go through a series of exercises, repeating each movement twelve times. The muscles exercised are the flexors and extensors, pronators and supinators of the arm and forearm, the pectorals and scapulars, and the muscles of the neck and abdomen. Suspending these exercises for a time, as an experiment, has always been followed by running down of my general condition.

The value of work in recovery from chronic conditions often is underestimated. An invalid condemned to comparative helplessness is prone to become morbid and to brood over his troubles. Occupation, therefore is a great help in preserving a sane and wholesome attitude of mind. During the past two years I have tried, in spite of sufferings, to carry on more or less regular work. I have seen a few patients, written for *CLINICAL MEDICINE*, taught languages, and botanized, and I have been the better for it. Though these things have been done to the accompaniment of much pain, they have helped me to forget the

pain, and better still, they have kept me from brooding.

Etiological Factors

The cause of my lesion is an interesting question, yet, one that will, probably, never be answered. I believed for a time that it was a case of hyperacidosis, brought on by eating too freely of grape-fruit. I was compelled to stop all acid fruits, because the attempt to use them at once aggravates all the symptoms.

About twenty years ago, I was struck by a baseball on the spinous process of the tenth dorsal vertebra. It was very sore for six months, after which the soreness gradually disappeared, and I forgot all about it. In 1909, I was thrown from a street-car to the pavement, acquiring a scalp wound and a number of bruises; none of which, however, were near the spine.

In 1912, I was in an automobile collision, bruising my right hip. When, thereafter, I began to experience pain and spasm in the right sciatic nerve, I blamed this accident. When it was discovered, though, that the real lesion was at the tenth dorsal vertebra, I abandoned this theory.

Clinical Aspects

In my opinion, the most instructive features of the case, clinically, are:

1. The defects of the plaster cast, these emphasizing the importance of extension, and the comparatively minor importance of immobilization.

2. The distance of the seat of the pain from the lesion.

3. The extreme violence and spasmodic character of the pain.

4. The influence of diet and exercise.

5. The influences that tend to bring on spasm are: Any sudden movement, getting chilly, the recumbent posture, and the various physiological spasmodic actions, such as yawning, sneezing, coughing, retching, and hiccuping.

6. The curative action of morphine, with the absence of its usual unpleasant effects.

I should be glad to hear from any of the readers of *CLINICAL MEDICINE* who have met similar cases, concerning their experiences and observations.

I owe a debt of gratitude to the members of the profession mentioned above, also to Dr. John H. Byrne, Dr. W. L. Callaway, Dr. W. L. Copeland, Dr. S. R. Slaymaker, of Chicago, and to Dr. T. N. Bogart, of Excelsior Springs, Missouri. These gentlemen, often at a considerable sacrifice of time and convenience, have done much to alleviate my sufferings.

Progress Made in Roentgenology During the Last Twenty Years

By MAX REICHMANN, M. D., Chicago, Illinois
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AMONG the large number of persons who, on the twenty-fifth of January, 1896, in Wuerzburg, listened to the lecture delivered by Prof. Konrad W. Roentgen, there probably was not one who even dreamed of the possibility that he was standing at the cradle of a science that was destined to give the deathblow to many beliefs in various branches of medicine so deeply rooted that they had come to be looked upon as laws.

Anatomy, physiology, pathology, internal medicine, surgery, orthopedics, otolaryngology, and so on, all of these disciplines were forced by the all-pervading rays, that bear the name of their discoverer, to give up old and favorite postulates and to re-

organize their conceptions in these domains.

Since the production of the Roentgen-rays depends upon complicated electrotechnical apparatus, the revolutionary changes that have come in the wake of Roentgen's discovery in almost every branch of the healing art scarcely would have been possible had not the technical sciences constantly increased the refinements of our apparatus, and thus enabled us today to carry out investigations, with the aid of the Roentgen-rays that but ten years ago seemed an impossibility.

Inasmuch as from its earliest inception roentgenology developed into three distinctive groups, the progress recorded in this

science in the course of the last twenty years must be examined from these respective aspects.

Roentgenography

That branch of roentgenology known as roentgenography received, from the very first, more attention than the others, so that it is not to be wondered that it can record the most conspicuous progress. Not only has roentgenographic depiction of the skeleton attained such a degree of perfection that it hardly can be surpassed, but, thanks to the remarkable improvements made in modern instruments, we are now in a position with an exposure of only a few seconds to picture upon the plate the organs of the various body-cavities, even in the presence of considerable adiposity.

By means of Kochler's teleroentgenography, roentgenographs of the heart, in which the latter appears in its natural size, have contributed much to the diagnosis of the diseases of this organ. Still, it must be conceded that Grædel's classical investigations, by means of the fluoroscope, give him the right to be considered the founder of modern roentgenologic diagnosis of heart affections.

As another great progress may be named the pyelographic representation of the kidneys, especially since solutions of the noninjurious thorium salts are employed in place of those of the more or less dangerous silver salts. It is now possible to study various pathological changes of the renal pelvis and therefrom draw diagnostic inference formerly obtainable only by means of an operation.

In the domain of otolaryngology, the possibility of preparing technically perfect plates served to promote the diagnosis of disease of the accessory sinuses. In addition, the method of making single exposures of both mastoid processes, as demonstrated some years ago by Lange, of Cincinnati, had made it possible to establish graphically a diagnosis of mastoid disease that had been made tentatively on clinical grounds or had only been suspected.

Today, the production of Roentgen-stereograms has become all but a matter of routine, especially in the interpretation of fractures and of diseases of the thoracic viscera.

Rieder and Kastle suggested cinematographic pictures of organs with involuntary movements. Unfortunately, the great expense of this procedure prevented its prompt employment; and the same is true for the serial exposures of the gastrointestinal canal, as suggested by Cole, of New York. However, it is fortunate that modern roentgenoscopy affords a perfect substitute for those expensive methods.

Roentgenoscopy

Case, Carmen, and LeWald, in our country, are deserving of great credit for their improvements of the fluoroscopic examinations of the gastrointestinal canal—as introduced by Holzkecht—after a contrast-meal or after a contrast-enema into the colon. It is safe to assert that even a detailed and careful examination of a patient having some gastrointestinal disease is not sufficient scientifically, unless a complete roentgenoscopic examination has been made.

As already mentioned, roentgenoscopic examinations of the heart are of great value in many cases. Unfortunately, similar investigations in the case of lung disease are less serviceable, it being too easy to overlook many important details.

Roentgenoscopic investigation also is of eminent service in the case of foreign bodies that have entered the organs and which by means of such examinations can readily be localized by one or the other of the many methods that have been proposed.

Roentgenotherapy

From the very beginning of roentgenology, the treatment of various skin diseases by means of Roentgen-rays has been employed. In recent years, the successful treatment of uterine hemorrhages also has been practiced in cases in which the bleeding was connected with the approaching climacteric or caused by benign tumors. Unfortunately, the hope of being able to influence malignant newgrowths curatively by means of roentgenization has not been fulfilled, thus far; which, in part undoubtedly is due to the absence of scientific dosage. However, we may give room to the hope that it may soon be possible to discover a method of dosage, so that roentgenology may celebrate its triumphs in this domain likewise.

Barber's Itch

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BARBERS'-ITCH is the lay name for sycosis vulgaris or sycosis staphylo-genes, by which is understood the purulent inflammation of those hair-follicles which contain short thick hairs, as, those of the beard, pubes, axillæ, eyebrows, and eyelashes. It is a pyogenic infection produced by the staphylococcus (usually the aureus), the same organism that causes superficial impetigo (Bockhart) and furunculosis. It may be primary, carried originally to the skin by a barber's razor, inoculating the hair-follicles of the beard, or may be secondary, often to a chronic catarrh of the nasal mucous membrane, when it is limited to the upper lip. In another, rarer, series of cases, it appears in connection with seborrheic eczema of the axillary or pubic regions or in margined spots of the beard or eyebrows.

Anatomical Reasons for the Pathology

The pathology of the disease consists, therefore, of the general features of sup-puration (cell emigration, cell proliferation, exudate formation, softening of tissue, necrosis, and scar-formation), modified by its peculiar localization in the follicles of the long hairs.

To understand it, let us remember the anatomy of the follicles of the long hairs. Such a follicle has a skin outlet, a funnel-like opening, roofed with horny layers, and called the mouth of the follicle. Just below this, there is a constriction, or neck, where the sebaceous gland empties, this gland being very large, proportionately, in the lanugo-hairs, but, very small in the long hairs. Below the neck, is the bulb, or dilated part of the follicle. Inside the follicle, is the inner root-sheath, a horny structure, which comes out with the hair when epilated, and the outer root-sheath, a rete structure, which remains in the follicle and from which the regeneration of the hair takes place.

Now we shall understand why there are four stages of sycosis—two superficial and two infiltrating ones—and why the treatment is so quick and easy in the superficial

and so difficult and disappointing in the infiltrating stages.

The first stage is an impetigo of the mouth of the hair-follicle, a small flat pustule of which the roof is the horny layer, pierced by the hair, and the basis, the rete. The cocci are, at this stage, found in the pustule only, and the reaction in the cutis is very slight.

The second stage begins with the growth of the cocci into the neck of the follicle, along the hair fissure as far as the opening of the sebaceous gland. Were the gland here large enough, as in impetigo of the lanugo hairs, the pus could accumulate here and the process be accelerated; but, being arrested by the constriction of the neck, the leukocytes assemble in the connective tissue outside, around the neck of the follicle, producing a nodular perifolliculitis, an inflammatory, firm, painful, but, not deeply extending nodule at the mouth of the hair-follicle.

The connective tissue is here involved; it is swollen with proliferating connective-tissue cells and leukocytic infiltration, without as yet forming an abscess. This stage is more troublesome, but, still, easily amenable to antiphlogistic and antiparasitic treatment.

The third stage represents a perifollicular abscess, in which the infiltration comes to liquefaction of tissue and formation of an abscess around the hair-follicle, not in the follicle itself. Around the suppurating follicle, there, consequently, is found a broad zone of serious inflammation, accompanied by great edema of the cutis. It is obvious that in all these three stages, in which the hair-follicle itself does not suppurate, complete restitution is possible.

The fourth stage is that of suppuration of the hair-follicle itself—the follicular abscess—which, naturally, always ends with loss of hair and the formation of a scar.

As to the Treatment

The method of treatment and its success depend upon the stage of the disease. If we get the patient in the first stage, that is,

in the earlier days of infection, when there are the multiple small superficial pustules or thin crusts, each pierced by a hair, with no diffuse swelling of the skin, we shall succeed by applying wet dressings of mercury bichloride (1:1000) or of chinisol (now hard to get), one tablet dissolved in 8 ounces of water; or, if there is considerable hyperemia around the pustules, by applying liquor of aluminum acetate, 1-2 ounces in 8 ounces of water; while at night-time rubbing in an ammoniated-mercury ointment. With this treatment, cure ordinarily results in from one to two weeks.

More troublesome is the second stage, where there is nodular infiltration of the neck of the follicles, diffuse edema of the cutis and much tension and pain of the skin. External heat then is called for, as, for instance, hot linseed poultices over the dressings just mentioned. Or small pieces of mercury plaster are applied over the nodules, the entire area is covered with the foregoing dressings, and, on top, linseed poultices, to keep the dressing warm. In this way, it is possible to secure absorption of the nodular infiltration or its quick softening and evacuation.

Especially troublesome are the third and fourth stages, with their deep perifollicular abscesses, infection, and suppuration of the bulb and the secondary inflammation of the cutis. The disease then is very persistent, frequently relapsing, and may require many months and often years of patient treatment. At this stage, epilation constitutes a necessary part of the treatment, while the medicinal applications are of the same antiparasitic and antiphlogistic character.

Epilation has the purpose of removing with the hairs as many cocci as possible and of creating a ready portal of entry for remedial substances. The beard is shaved closely (which often is quite painful) and the treatment described kept up for two or three days. As soon as the hair stumps have grown sufficiently to be caught by a forceps (a good hair-forceps with flat parallel blades must be used), the hairs of the diseased area must be epilated, while, interchanging with the liquid applications, antiparasitic and reducing pastes are to be applied.

The success of this treatment depends upon the skill of the physician to recognize the relation of the local follicular lesions to

the general inflammatory condition of the skin; the more general reaction, the less active and irritating must be the treatment. In the first instance, use astringent and antiphlogistic lotions (boric acid, 3 percent; liquor of aluminum acetate, 5 percent; resorcin, 2 percent) and mild pastes and salves. In the second instance, use stronger antiparasitic and reducing drugs.

As the conditions often vary and relapses occur, they have to be watched and the method of treatment selected accordingly. A good paste of medium strength is this:

Tannic Acid	06. to 1.5
Precipitated Sulphur	1.5 to 3.0
Zinc oxide	4.0
Starch	4.0
Petrolatum, enough to make	30.0

If the process is more localized, stronger drugs may be used, such as tar, pyrogallie acid, mercurial salts, and so forth, beginning with low concentrations. Of the stronger preparations, the following paste is of good service:

Mercuryoleate (5 per cent)	25.0
Zinc oxide	7.0
Salicylic acid	1.0
Ichthyol	1.0
Starch	7.00
Petrolatum	14.0

A most convenient and reliable treatment is offered by the x-rays. That these have to be cautiously and carefully applied, goes without saying. When the hairs begin to fall out from the radiated surface, a cure often is accomplished. But, not always.

In many cases, the disease relapses as soon as the hairs begin to grow again. This obviously is caused by streptococci remaining within the prickly layer of the outer root-sheath and becoming active as soon as the growing hair exerts pressure within the follicle. It then is necessary to repeat the cycle of treatment. In almost every case, though, one can attain a complete cure.

In cases where the x-ray treatments have to be repeated, one has especially to be cautious against producing burns or permanent atrophy. In one instance in my practice, a case of eight years' duration and of an unusually stubborn form, I could not prevent producing permanent alopecia and atrophy of the skin. But, such cases are very rare. In the majority, a rapid cure is accomplished by weak doses and producing an alopecia of short duration.

Brief on Tumors of the Testicle

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THIS paper, though dealing primarily with testicular tumors and our experience with them, necessarily comprises the various enlargements within the scrotum, their diagnosis, frequency, and prognosis.

General Diagnostic Considerations

To be of any real assistance to the patient, the physician should make an early diagnosis and carry out his line of treatment immediately; for, even a few days' delay may decide the question of success or failure. A general physical survey should, of course, be made. The history, particularly in relation to previous diseases, is helpful, especially considering traumatism, acute or chronic general infections, syphilis, gonorrhea, tuberculosis, and mumps. The age of the patient is important. In the physical examination, it is well to bear in mind a few general diagnostic points.

In palpating the scrotum for tumor an attempt always should be made to outline the contained organs as they are normally. The relations of the epididymis and testicle, the presence of fluid in the tunica vaginalis, the size and consistency of the spermatic cord, and size and hardness of the cord relatively to the external ring are cardinal points. The vas deferens should be definitely outlined and carefully compared with its fellow upon the opposite side.

The urethra should be examined for coarctations and endoscopically for inflamed patches or diseased glands. The cystoscope is used to examine the bladder—vesical tuberculosis or secondary malignant invasion of the bladder, if present, thereby is easily shown. The prostate gland is palpated per rectum, abnormalities are noted, and secretions expressed for examination. The vesicles are similarly treated. Cicatrices of old sores or opened buboes should be looked for, on the genitals and in the groins.

Differential Diagnosis

In the differentiation of fluid collections in the tunica vaginalis and cord, hydroceles, cysts, and hernias, transillumination

with a small flashlamp is an invaluable aid.

The commonest tumor-producing testicular disease-conditions that we encounter are *epididymitis* and *epididymoorchitis*. This may be specific (gonorrheal), tuberculous, or traumatic. As a rule it is secondary to a posterior urethritis—following especially strain, injury, drinking or intercourse. Usually preceded by pain in the groin, a hard, very tender swelling, most often unilateral, appears within the scrotal sac. The testicle can be palpated anteriorly, while a slight degree of hydrocele may be present. There are moderate constitutional symptoms.

Because of "strangulation," so to speak, of a very sensitive tissue and the effect upon the sympathetic system, the pain in acute inflammatory tumors of the testicle is of a peculiar sickening character. Early operative interference gives immediate relief from pain and shortens convalescence considerably. The authors believe that it would be better if all cases were treated by epididymotomy. Left alone, a localized abscess may result, and testicular atrophy may be a late sequel. Permanent induration is usual. The patient very often is made sterile on the affected side, by vas-deferens occlusion. Epididymotomy is the best prophylactic of sterility.

In practically every case of epididymitis, there is an infectious inflammation of the seminal vesicles at the same time, which must be taken into consideration in the after-treatment. Epididymitis most often is confounded with simple orchitis from injury and tuberculous epididymitis.

Simple *orchitis* from injury is, of course, common, but, as a rule, is a transient affair, though attended with much pain and swelling. The after-effects may, however, be very serious—as the condition predisposes to atrophy (with sterility), tuberculosis, and malignancy. Malignancy may follow very rapidly.

Tuberculosis of the testicle mostly has its origin in the epididymis, though it has been

met with in the testicle itself. It is most often in the head (*globus major*). Onset and growth are slow and pain is not severe. As a rule, there is a history of tuberculosis elsewhere in the body and often of a local injury. In quite a number of cases of tuberculous testis, the condition is primary.

Hydrocele is frequent and there is little pain. In the later stages, the vas deferens and prostate gland become hard and nodular, while multiple fistulæ often form in the scrotum. The bacilli can be found in the urine. The blood- and skin-findings are characteristic. Aspiration of the hydrocele fluid often demonstrates the Koch bacillus. It should be remembered that tuberculosis of the testicle may be engrafted upon a chronic gonorrheal epididymitis.

Carcinomatous Tumors

The malignant tumors of the testicle are the fastest-growing of any except the acute inflammatory conditions. The family-history, age of the patient, the history of injury, of old gonorrheal epididymitis, and manner of onset, all are helpful in the diagnosis. The patient ordinarily is over forty and dates the beginning of his trouble from some accidental traumatism of the parts. Syphilis should be excluded by careful questioning and blood- and skin reactions. The growth is painless, unless handled roughly; it is hard, symmetrical, and there is no hydrocele. Later, the cord thickens, the pelvic and inguinal glands enlarge, and pain is constant. Constitutional symptoms eventually appear, with metastases in the liver, lungs, and other organs, and the outcome is rapidly fatal.

Clinically, *carcinoma* and *sarcoma* are identical, and their treatment and the prognosis are essentially the same. The hard *scirrhous* cancer, however, is slow-growing, more localized, and does not recur quite so frequently as do the others. The various blood tests (e. g. the Abderhalden) may help in the diagnosis; but, rapid, decisive surgical action is the keynote of success.

Gumma of the testicle is very likely to be confused with the malignant neoplasms. At first, the clinical signs are very similar. The Wassermann and the Luetin tests are positive. The history of lues is obtained and the general adenopathy and other signs of late syphilis generally are evident. *Tuberculosis*, of course, may be present, just as

it or syphilis may be combined with malignancy. The therapeutic test is valuable when one is in doubt or when the patient refuses operation. If the tumor is *syphilitic*, vigorous mixed treatment and salvarsan ought to have a very beneficial effect within two weeks. A broken-down gumma resembles tuberculosis very closely, however, the cord and prostatic findings are negative. Reverting to the Wassermann test: This never is conclusive when taken alone; in a syphilitic, cancer may develop, a patient with carcinoma may contract syphilis.

Hematoma following trauma is easy enough to diagnose immediately after the injury; later, it may not be so simple. Malignancy later may be superimposed upon hematoma. Hematoma may result in testicular atrophy. Although contrary to the prevalent practice, the authors believe that every hematoma should be laid open, the clots evacuated, the cavity packed and drained. In old hematomas and hydroceles, especially if complicated by hernia, incision alone enables one accurately to diagnose the condition.

Fungus of the testes may follow trauma, abscess, gumma or carcinoma. The diagnosis demands the use of the microscope, the Wassermann test, a careful study of the history of the case, and perhaps a therapeutic test with salvarsan, mercury, and potassium iodide. What has been said of fungus of the testis applies in a general way to hernia of the testis.

The conditions enumerated are those that are most often met with and which are to be considered in making a diagnosis. Following are some of the more infrequent ones: "Supernumerary testicle" (?), usually a paraepididymal cyst, which is painless unless injured, spermatic cyst, encysted hydrocele. Hernia, hematocele, benign tumor (e. g. fibromata and osteomata) are often met associated with tortioned testicle. Echinococcus disease, varix, and simple hypertrophied glands should be considered.

Cases From Practice

To emphasize the necessity for early operation, we will instance two cases from practice:

Case 1. A boy of 18, who was suffering from gonorrhea, injured his right testicle. What was diagnosed as orchitis supervened. Three weeks later, he consulted Doctor Lydston. A testicular tumor involving the

entire testis was found. This was smooth, insensitive, painless, elastic, and the size of one's fist. There was no glandular involvement and, aside from the testicular tumor, the patient was in good health. The tumor was removed, the cord being resected high up in the pelvis. Wound healing was prompt. Histologically, the tumor was typic adenosarcoma. When the patient was last seen, twelve years after the operation, he apparently still was perfectly well.

Case 2. A physician, 28 years of age, received a slight injury of the right testicle. This was followed by a moderate swelling of the testicle, which, at first, was only slightly painful. The pain and swelling, however, increased, with considerable neuralgic pain in the cord. There was no temperature. When the patient consulted us only three weeks after the injury, there was a swelling that apparently was limited to the epididymis (*globus minor*). This was slightly sensitive and apparently about the size of the thumb. As the patient many years before had had tuberculosis, infection of the testicle with tubercle-bacilli was suspected. Epididymectomy was proposed and consented to. The operation revealed that the epididymis was normal, the tumor that had been mistaken for the *globus minor* being a circumscribed growth in the lower pole of the testicle. The rest of the testicle was normal. (Fig. 1).

There was no history of syphilis and no Wasserman test had been made, but, the appearance of the neoplasm suggested the possibility of gumma. A section, therefore, was taken for examination and, unfortunately, showed the tumor to be carcinoma.

Complete oblation of the testicle was immediately performed, the cord being severed as high up as possible. A small inguinal hernia being found, this was operated for at the same time. The growth was found to be limited to the lower pole of the testicle.

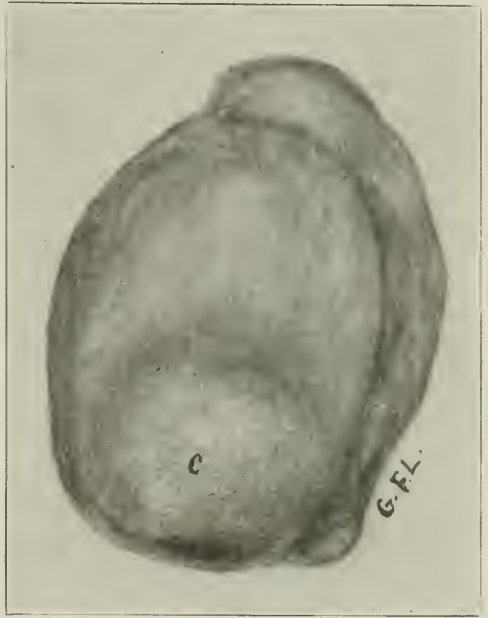


Fig. 1. Showing carcinoma involving lower pole of testicle at C. (Case 2.)

This case is remarkable as regards early diagnosis. The patient recovered very promptly and appears to be none the worse for wear. It is the authors' belief that this case is especially interesting because of the early period at which the operation was performed and that it will not be surprising if there will be no recurrence.



Selective-Service Boards and the Medical Men in Making and Keeping Up an Army*

By LUTHER SEXTON, M. D., New Orleans, Louisiana

SELECTIVE-SERVICE boards are bodies of men cooperating to select a suitable army out of ten million citizens to win the victory for democracy. Our government and state owe a duty both to the dead and the living and also to the generations that are to follow. As medical men we have to do our part in assisting the army so that democracy shall not perish from the face of the earth and that the ocean shall be free again. If our selection is bad in picking men for this work, we cause to the government the expense of transporting a man, who is found deficient upon first trial at the cantonment, and, also, do the individual an injustice.

While all the aids to diagnosis should be used when possible, it must still be the clinicians who can select the good from the bad virtually at sight without the aid of laboratory or refinements in diagnosis; they are to separate ten million into the two classes of the fit and the defective. Men can be maintained at their best physically only when they are examined frequently; the leaky heart valves must be rested, the diet, exercise and drink must be regulated to reduce nephritic diseases, as heart- and kidney lesions have increased thirty percent in recent years and now lead pneumonia in fatality.

To Conserve Man Power.

The United States must conserve its man power by every possible means. France has already lost more men in this war than she gained in birth rate since 1870. We must win this war by conserving the food and health at home as efficiently as we expect the army and navy to be on land and sea. Our doctors and soldiers are going to France to meet a shrewd military enemy, who has been preparing for this supreme test for half a century;—who is

thoroughly equipped and well dug in. There should be no room for slackers or discontents left at home, but, to the limit of our ability, moral and financial, we should back up our brave soldiers and allies who are going over the top to "No Man's Land," many of them never to return again. On account of its being fought on foreign soil, the war is not as popular as it would be if the United States were invaded; on this account, our selective-service boards in some instances have toiled all day to certify only six soldiers. As found in the parable of the wedding feast the conscripts made many excuses: one was so necessary to his business that it would go to destruction without his guiding genius; another desired to escape on religious scruples, and the commandment "Thou Shalt Not Kill;" as if our enemy was remembering the sixth commandment—but, the far greater part of those claiming exemption had married only after the draft law had gone into effect. In the last instance, however, the unwillingness manifested on the part of many to volunteer property and person for the country's defense is in a way affording aid and comfort to the enemy.

Doctor Crile, just back from a base hospital at the front, says that the Central Powers are not nearly exhausted, that the war is not half over, that German prisoners are found to be well nourished, clothed and armed. He declares that there is no glimmer of dawn on the war's eastern horizon. If one million of our citizens are to be sent to the front, ninety-nine million should be conserving, working and saving at home. At the beginning of the war, in the United States only 2 percent of the medical men needed were in the service, whereas three-fourths of the British and French medical men under fifty are at present in uniform. If the United States send doctors to the service in the same proportion as Great Britain and France, we have to send forty-

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seven thousand instead of twenty-two thousand.

So many exaggerated statements are made about mortality among doctors at the front that it might be of interest to know that during the past three years of war only two hundred and sixty-six medical men of the British army have been killed outright and only one thousand two hundred and thirty-four wounded out of twelve thousand in service. The sanitation advised by medical men made the building of the Panama Canal possible after the French had failed to build it, and our medical men in the army are playing a no less important part by working for the prevention of typhoid and paratyphoid, smallpox, malaria, typhus fever and tetanus.

The Work of One Local Board

Our local board No. 10 called 676 registrants, examined 637, rejected 180, equivalent to 28 percent for causes as follows:—Weight and general conditions, suspected tuberculosis—45; tuberculosis, second and third stages—6; heart—30; acute genito-urinary—4; feet—2; eyes—29; hearing—11; teeth—1; acute syphilis—4; paralysis—2; mentally deficient—7; hernia—18; epilepsy—2; hemorrhoids—3; loss of fingers—3; legs—7; arms—4; goitre and aneurism—2; atrophy of limbs—3; total—180.

The Venereal Danger

It has been estimated that 80 percent. of our colored population are luetic, and our ignorant and bibulous white population run a close second in this disease. Since typhoid and paratyphoid have been eliminated, venereal diseases in one form or another have been the great disturbing factor of the army; hence insistence of the army and navy on placing no cantonment near a town or city with a legalized vice district. Segregated vice is often more damaging to an army than the bullets of an enemy. Every soldier who is out in a segregated district at night is expected to take a prophylactic injection upon his return to camp, but, the rule is evaded more often than complied with because it is a demerit against a man thus to report. Syphilis with its complications has been classified among the five best killers. It not only attacks all the soft tissues of the body, but honeycombs the nervous and bony structure, thus causing many rejections. While we found a few instances of acute syphilis and gonorrhea in

the first stages, we saw many more in the second and third stages, and especially was this true of heart and nervous lesions in which tachycardia was the rule rather than the exception. Syphilis and gonorrhea are the national epidemics among soldiers exposed to the red-light districts in any country. It is a well known fact among internists that when they are in doubt about a heart lesion and give the patient the mixed treatment this often is followed by a remarkable improvement. Our profession as a body should stand for the abolition of all segregated districts. An educational campaign urgently is called for by lectures, good moving pictures, such as "Damaged Goods", sex hygiene, in which prudery is put to rout and in which venereal diseases are not treated as if they were no more important than an ordinary bad cold, but on the contrary in which the public should be made to know that any treatment for syphilis, not covering a period of at least two years or after several negative Wassermanns, is quacking pure and simple.

The Fit and the Unfit

The great expense of training citizens into soldiers and transporting them to the cantonment is an unnecessary trouble to the government unless the selective-service boards in the beginning have selected subjects suitable for the service. It would not be amiss in my judgment if the doctor vaccinated the soldiers at their first successful examination against smallpox, typhoid and paratyphoid; the soldiers would then be virtually ready for training when they arrive at the cantonment. No effort should be spared by the sanitary and surgical directors of the army to offer the soldiers the very best chance in the way of healthy environments and good hospital accommodations. Our profession at the front should do its work so well that every limb possible should be saved and every fracture so scientifically treated that few deformities result. The army standards do not exact a perfect physical man and the selective-service boards have been so instructed, but, in trying to make this army of a million, the unfit found between the ages of twenty-one and thirty-one have averaged from thirty to forty percent. Among the principal causes are, sight, bad teeth, light weight, defective lungs and heart, hernia, and venereal diseases. If one-third of our

young men are thus diseased, what must be the percentage beyond thirty-one in our general population?

It should be the object and desire of the medical profession, who are unfortunately left at home, to render fit all these minor defects in order to fill in the future drafts in the army. To the campaign before the public against cancer, tuberculosis, and venereal diseases should be added the correction of all minor defects, bringing up the physical standard of our citizens to the fitness for the army and navy, as well as the greater duty to the fathers of coming generations. Now is the psychological moment for the general public to back up the medical profession in correcting these minor defects that now excuse one out of every three persons for military service. There should be no permanent exemption for refraction cases, minor surgical defects, as hernia, hammertoe, hemorrhoids, bad teeth and many other conditions curable by minor surgical operations, and the excessive use of tobacco and alcohol should be discouraged in order to slow down the exaggerated pulses.

Worse Than Bullets and Shrapnell

Wine, bad women and venereal diseases come in natural combination; the medical profession therefore should stand as one against the excessive use of alcoholic beverages and exposure to commercialized vice, so that our young men who return from the war shall not be shot to pieces by venereal diseases. It may seem a hard thing to say, but, it would be better for the future of America if no serious syphilitic person were to return from the war to entail his misery and disease upon unborn generations at home. The greatest danger to a young soldier in a wide open cantonment is, not bullets, but, the temptations that are in his way and overcome his feeble resistance to the lust of the flesh.

False and True Causes for Rejection

The way we detected malingerers who claim that they could not hear was, by asking questions at a distance of twenty feet with their backs turned and one ear covered. "Do you not feel that the oceans should be free to travel and that the United States have been outraged? Do you not want to back up our President? How much did you give the Red Cross, Y. M. C. A. and K. of C. drive? Then suddenly ask at

a lower tone of voice, "On what grounds do you claim exemption?" "Are you not the only support of your family?" In this way, you will get an answer to a lower tone of voice. We always referred to the clinic or doctors, who have been treating a man's eyes or ears, for information, but, as this work was gratuitous we sent eye and ear cases, which we could not determine, to the office of a specialist instead of asking them to lose from four to six weeks time from their practice. Tobacco- and whisky-hearts and excitement of the examination account for many having fast pulse, for which due allowance must be made. If there is no organic murmur, or if only a functional nervous disturbance or anemic murmur exists, army training, regular food, sleep and cutting the allowance of the chain smoker and regular tippler, often will reduce the fast pulse to normal. About the best thing that can happen to the confined office man who really never has any exercise harder than inhaling a cigarette, is, to send him to the army camp, cut out his booze and cigarettes and watch him grow under regular exercise, proper and well cooked food, and sufficient sleep. Our climatic conditions and cosmopolitan forbears make our soldiers ten to twenty percent. lighter in weight than soldiers in colder climates and from more hardy races. However, light weight is not so much an objection when we remember that ex-Confederate General Wheeler and Winston Spencer Churchill were only slight above the hundred and ten pound limit. Again, having no excess avoirdupois ought to enable a man to advance and retreat with more ease. The really hard question for the medical examiner to determine is, whether this light weight is dependent upon heredity, environment, lack of sufficient and properly cooked food, or whether it is caused by lung- or some other serious disease. The medical examiner should be a good clinical diagnostician, more handy with his stethoscope, and experienced in urinalysis than the more refined diagnosis of the laboratory and microscope, which, in examining from fifty to seventy men per day, the doctors have very little time to use. We found many first-stage tuberculous patients who did not know themselves afflicted with the disease, but, fortunately, they were in the curative stage, if they

heeded the advice given them, which was, at once to consult their family physician about the proper diet, medication and mode of living. On account of our warm climate, many tuberculous persons from colder climates come to live in New Orleans and our own population and tuberculous houses already contain perhaps five thousand open and ten thousand concealed cases. Our general death rate from consumption in the United States in one year amounts to as many men as we now have on the French battle field. Our million and a half consumptives in America call for twice as many beds as in all of our cantonments combined; so, with physical signs of tuberculosis, light weight, anemia, and evening temperature, the men should not be sent to the cantonment.

In concluding, we wish to say that the medical men of the selective-service boards have the unqualified help and support of

the lay members, and the following gives Provost Marshall General Crowder's estimate of the boards' efficiency.

General Crowder pays tribute to the zeal and patriotism of more than thirty thousand men who compose the machinery of the selective system. With only ten weeks for the task, the first national increment of 687,000 men was drawn, he says, by a nation "moving breathlessly, supported by the governors of the states and by the members of the selection boards, with a patriotism, devotion and unselfish zeal that remains an inspiration." "You are, in effect," he added, "a part of the army of the United States, in that you are the source of its supply. The nation is rapidly becoming a great system, and, if this part of it were disturbed, it is not too much to say that the system would be shattered so effectively that it would take weeks, if not months, to repair the damage."

The Therapeutic Virtues of Iris Versicolor, the "Vegetable Mercurial"

By C. W. CANAN, M. D., B. S., Orkney Springs, Virginia

ALTHOUGH iris versicolor, or blueflag-root, has been neglected as a remedy, yet, the time is not far distant when it will come into its own. The war in Europe has made it impossible for us to import at will anything and everything that we needed, so, we have been compelled to study our native medicinal plants.

Iris versicolor being indigenous to this continent, its study ere long will be stimulated, and, in our own opinion it will then hold one of the foremost places in our armamentarium against diseases in which it is indicated.

We know of no remedy that better exemplifies the full meaning of the term alterative than iris versicolor. However, before going further, we want to warn the practitioner that he need not expect good results from a poor preparation of this drug. The market has been flooded with poor stock, consequently, poor finished products. Very frequently a vegetable drug is of inferior quality simply because the collector has neglected to gather it in the proper season or knows little or cares less about

how to dry and to care for the article. All this is very important when applied to the iris-root. As a matter of fact, the roots should be dug only in the autumn, after the summer-growth has ceased, and they should be carefully cleaned and thoroughly dried in the shade in a clean, well-ventilated place. They should be spread out thinly on racks or shelves and, when thoroughly air-dry, stored in a dry place.

Last fall we gathered some iris-roots and cared for them ourselves and had a reliable firm to make them up into a fluid extract; and we must say that this has proved to be the most active fluid extract of iris we have ever used. At about the same time, we purchased several samples of the drug in the open market, and some of these were absolutely worthless, while the others were very different in medicinal strength. In ordering preparations of iris, be sure that you order from a firm whose reputation is above reproach.

The Action of Iris Versicolor

A true preparation of the drug is cholagogue-cathartic and alterative. Its ac-

tion on the hepatic functions is very different from that of calomel; calomel irritates, iris stimulates; calomel whips up the hepatic secretions, while iris coaxes and tones up its function. In cases in which the hepatic function is arrested or the case is a stubborn one, do not think that merely a few doses of iris will bring about a cure. You will be deceived if you do. Continue the drug week after week and you will not be disappointed.

During last summer, we had a patient who had jaundice badly, having been treated with calomel for a long time, without any perceptible benefit. He was strongly yellowed, his tongue was heavily coated, abdomen was prominent, and the stools were clay-colored and the bowels constipated. In fact all the symptoms were present that go to make up the picture of these typical stubborn cases, especially where there is malaria in the background.

Besides prescribing the mineral baths, we placed this patient upon a combination of iris, bile salts and chionanthus, four times a day. In one week, our patient showed signs of improvement; in a fortnight, he was considerably better; and in six weeks he was able to go back to work, which he had given up three months before.

On the lymphatic system, iris exerts a beneficial influence; its action in this direction resembling that of iodine, minus the secondary symptoms that often follow the administration of that drug. It is a remedy of merit in all forms of autotoxemia. It stimulates the excretion of waste and poison through the various channels of elimination—very important factors in curing any diseased condition. It acts upon glands with ducts and those that are ductless. It is valuable, either alone or in conjunction with other agents, in all forms of altered metabolism or deranged body-chemistry. As a remedy in all strumous conditions, it has few equals; it is especially valuable in secondary and tertiary syphilis, enhancing the action of the iodides when they are given. In all skin conditions associated with faulty eliminations, it is valuable, but should be continued over long periods. It

is especially indicated for children who have enlargement of the superficial glands.

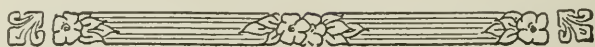
Some writers recommend it for enlargement of the thyroid gland, but, we have not been able to prove its value in this direction to our own satisfaction. In one case, there was marked improvement, but, we used tincture of iodine locally and, therefore could not tell to which agent the credit was due. In "splenitis," when the spleen is terribly congested and the portal circulation is badly engorged, iris is of use.

We have found iris one of the best drugs in irritation of the gastrointestinal tract, when the following symptoms predominate: sour eructations or vomiting of sour material; burning pain or distress in the epigastrium; a leaden-colored, thick, sodden tongue and clay-colored stools, with constipation. Then, again in skin diseases of a scaly or pustular nature, with marked lymphatic congestion.

It is also a remedy that should not be forgotten in that condition seen in strumous children who suffer repeated attacks of stomatitis, in which there is always enlargement of the submaxillary and cervical glands, with dry mouth, and altered salivary secretions. It should be remembered that perverted or altered salivary secretion always is indicative of the use of iris; also that a large or an overdose of it most likely will produce ptialism.

And now a few words in reference to reliable preparations of iris versicolor.

The fluid extract, if made from assayed crude stock which contains the standard amount of its active constituents, will give good results. If there is any doubt as to its reliability, you had better rely upon the specific medicine of iris, made by Lloyd Brothers, or else irisoid, which is the active principle and made by The Abbott Laboratories. You can depend upon both of these products—and, in these strenuous times, one must be doubly cautious. The increased cost of crude drugs and the rapid advance in the cost of alcohol and proof spirits, to say nothing of the advance in price of skilled labor, is an incentive for some men to make a few cents by cheapening their products.



An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[Continued from February issue, page 140.]

WHENCE came such admirable loveliness, without the natural channels of human development. And whither did the original legacy of polished life flee? Clearly, there was radical mutation of intelligence, one vanishing, another entering. Still, we are permitted no peep behind the mystic curtain. We cannot even try to imagine any feasible eventuality other than the flight of one soul and the occupation of the vacated tenement by another. There can be no double mortal faculties, so endowed that one can usurp the functions of the other. This would not be in harmony with perishable nature.

Then There Are the Dreams

The dream-realm is only less wonderful than that of the multiple personality, in that it is ever loyal to nature; the actual personality enthralled in the rapture of repose ever being the roving individual on excursions and partaking of delicious feasts or plunged into the horrible intricacies of difficulty or despair.

Sleep is so beautifully symbolical of death that sometimes one actually cannot resist the temptation to imagine that the soul steals away softly, when the slumber is deep, healthful, and natural, to go out on picnics with other temporarily disenthralled companions, so intensely real dreams not seldom are.

One time I had to give a dose of medicine at 2 o'clock in the morning and set an alarm-clock, but I was disturbed before the hour. Ten minutes before the time, I sat me down in a rocking-chair and was asleep in the act, but awoke at the first stroke of the clock. It would require ten years to live through what I dreamed as my experience in that brief lapse of time—and all most delightful.

Another time I was well exhausted from excessive work in an epidemic and had to cross a mountain, on a burro, where there was in the way a narrow path winding around the edge of a sheer precipice into an abyss a thousand feet below. I halted, to pass in the darkness of the nearing night.

The sure-footed little animal passed safely. I reached my destination at 9 o'clock, had a cold heavy supper, then went to bed at once, for, I was nearly dead for sleep.

The bed was a very high and broad one, but the night was fearfully hot, so, I nestled as close to the edge as possible, trying to secure a little freshness. Then a dream came over me. I dreamed that the burro slipped and we went whirring down the depths. Always before when dreaming of falling I awoke before striking the bottom, but this time it was different. I went down, with a crash, to the bottom, and was in a quandary to understand why I was not dead. I realized that I was hurt, but had not lost consciousness; and I wondered much what the burro might be thinking. I was only half awake. As a matter of fact, I had fallen off the bed down on the brick floor and sustained considerable hurt, as I found when fully aroused.

* * *

Multiple Personality

Somewhere, far away yonder beyond the sun, there is a lurk of mysteries that no being in human shape has ever yet fathomed. As one of the deep mysteries so well guarded, there is the double life in man and the mutability of rational faculties amounting to the dethronement and reenshrining and recrowning of reason. Quite a number of cases are familiar to the profession, of a realizing life being blotted out and a new conscious intelligence usurping the vacant abode, holding absolute sway for months and years, till finally, ousted as unceremoniously as the possession was taken, the legitimate habitant returned home again, picking up the thread of life at the point and time where and when it was severed, utterly unconscious of any feature of events during the interim of its absence. This is beyond any latitude of skeptical controversy.

I have met a case more extraordinary than any other of which I have chanced to read or to hear related by anyone who knew the circumstances, in that the returned consciousness narrated what had occurred during its own absence from the abandoned

tenement, while the rational memory was completely ignorant of any feature of the doings of the carnal personality during that period of absence.

A Remarkable Story of Changed Personality

The remarkable experience I am about to relate befell a mining prospector, an Englishman, who was travelling through the mountains on horseback, in a time of revolution, who gained a summit, unconscious of the impending hostile activities, when a battery suddenly opened fire close to him, just out of the road, on a force of the enemy that appeared in a valley below. The prospector's horse sprang from the road with such violence that it nearly hurled him out of the saddle, the loosely held reins quitting his hand. Ere he had time to snatch the reins again after righting himself in the saddle, the frightened animal leaped furiously and went over a precipice. The hapless rider struck the snag of a cedar growing out of a crevice in the crag some thirty feet below the summit, which passed through his coat and vest, in under his belt and into the flesh of the thigh, thus leaving him suspended head downward while his horse lay, a horrid mass, on the rocks a thousand feet below.

There being some sailors with the battery, they ran to the spot with ropes and soon brought the man up to the top, dead, as they supposed. Still, the commander ordered the insensate body carried to a house near by, and I was called from a house in the vicinity where I happened to be.

I found the man comatose, but not moribund, and he remained in that state for forty-eight hours. He was bruised or lacerated from the sternum to the thigh, where there was a deep, ragged wound. At last, his respiration became perceptible and rapidly developed to normal. The man was alive, yes, but he was as a newborn babe in a strange world. He knew and understood nothing. Language was incomprehensible to him, yet, he heard perfectly. No faculty nor function of nature seemed to be impaired, only the intellect and the power of verbal communication were missing. However, he was not slow to learn to eat and drink, and he was restored, physically, in two months.

The man quickly learned to speak Spanish and soon became a good penman. He settled down in the same house and was not very long in becoming the schoolmaster of

the community, and one of the best ever known within many leagues of his school. Like many things that we meet, the novelty of the event wore off with me, for, I had read and heard of several similar cases in my time and had listened to a very interesting lecture in Paris on this subject. And thus we jogged along.

Some three years after his coming, I had a hurry-call one day to go to him. He had fallen, head foremost, about fifty feet from a coconut-tree, the head plunging into soft mud, but from which the people immediately extricated him.

I discovered at once that his neck was not broken, but, the concussion of the brain appeared to be fatal, although he was not moribund. However, he was in a comatose condition, almost the same way as when I saw him the first time, although he was not wounded, save for the uncertain lesion the brain might have suffered.

He remained in this apathetic state for about the same number of hours as he was thus the other time, when he suddenly came to himself abruptly and in fluent English demanded his horse of me. The thread of his former conscious life then and there was taken up at the point where he lost consciousness going down the precipice.

When his little pupils, the Mexican boys and girls, began to crowd around him with their congratulations, he impatiently demanded of me why those little brats were bothering him. He recognized nobody and nothing with whom and with which he had for so long been familiar, understanding not a word of Spanish. I explained to the distressed people how the man had returned to his former intelligence and life that he had lost in the former accident (with which they were familiar) and then hurried the man home with me, to pass the night.

After I told the man—now again the prospector—he promptly affirmed that he had never believed in immortality, but that, most assuredly, his soul had been the habitant of another world, in another body, during all the time that his body had been a stranger to his natural faculties; for, he assured me, he retained every feature of such other strange life as clear and distinct as an especially vivid dream is remembered at the moment after awakening from sleep. Thereupon, he proceeded to give me a graphic account of how his soul must have

occupied the body of a young man who, apparently, had been dead as the result of drowning, but had revived with all memory of previous consciousness blotted out.

He lived there in a world no more beautiful than the tropical wonderland he was gazing upon from the portico of my office, a world of fruits and flowers along the unpretentious street of a rural hamlet. He told of learning a strange language, of people intensely affectionate, who never ceased to bemoan that he had forgotten them, of how he was a stranger in his own doting family-circle. Then, after a long while, he was stricken with fever reputed to be without a remedy; he saw the family gathered around his bed and heard them weeping and wailing over him. Then there was a deep quiet and the silence of nothingness, and then, suddenly, he opened his eyes and there saw me bending over him, in the act, as he imagined, of robbing him.

The man went back with me, early the next morning, to the house where he had lived, in order to take leave of the people who, as I had made him to understand, had treated him with such extreme kindness. There he found awaiting him some five hundred dollars that he had accumulated, but most of this he generously distributed among members of the family before departing. He told me that the great mining property which he was on his way to inspect was not so very far, and that I might expect to see him in three days on his return journey. Thus he bade me goodby and rode away, mounted on his own horse.

Little did he or I dream in that moment of parting that I should be performing an autopsy on his dead body ere the sun set

upon that day. He was murdered by bandits two hours after quitting my place. I did not ask his name or address, because he was to return so soon; hence, his family or friends never will know of his strange story and tragical fate.

Speculations About Life and the Soul

It would be strangely interesting, indeed, to know whether the soul of that drowned young man in the other world, beyond the undiscovered seas, reanimated the abandoned miner's body in this world during the absence of the latter's natural intelligence—a hypothesis certainly as feasible as to presume that some other vagrant spirit, roaming free from clay enthrallment, slipped in when the soul fled its paralyzed tenement. It might be equally interesting to know how the patient, dead from fever, came out of the crisis in the other world—whether he awoke from a lethargic sleep in his right mind and legitimate personality, the same as the man here came back to himself.

But, then, the soul of the murdered man! How transient was its sojourn in its rightful rehabilitation! Where did this soul find refuge when again so violently set adrift? How sad that this question ever must wait an answer!

No human intelligence can fathom the mystery of multiple personality and sub-conscious influence blending with conscious reality. Such an experience as the one here related is more than enough to stagger the ablest mind on earth. The ability and talent of the strange animation were equal to those of the original, normal, man, as I can judge, for, I had ample opportunity to observe them both.

[*To be continued.*]



What Others are Doing

LACTIC-ACID CULTURES IN DIGESTIVE TROUBLES OF INFANTS

According to Dr. Frank Vander Bogert (*N. Y. State Jour. Med.*, Jan.), the treatment of infections of the gastrointestinal tract in infancy and childhood is primarily one of diet. Since the growth and virulence of the organisms responsible depend upon the food ingested, the author follows Morse's classification of these microorganisms into two groups, namely: (1) the various forms of dysentery and other organisms than the gas-bacillus and (2) the gas-bacillus and allied organisms.

The microbes of the dysentery-group feed upon a proteid or carbohydrate diet, giving rise to harmful products from the proteid, but, without effect upon the carbohydrates. They, therefore, cease to cause trouble if proteids are withheld from the food.

The gas-bacilli, on the other hand, thrive and cause disturbance where there is an excess of carbohydrate pabulum. Their growth is inhibited by lactic acid and they cease to develop when a sufficient number of lactic-acid-producing organisms are present in the bowels.

In very acute cases, one's attention is called to the infection by diarrhea. There is, however, a large group less acute even chronic in nature, occurring both in infancy and in later childhood, in which diarrhea is not a prominent symptom or is absent altogether. In these cases, there is exhibited a marked toxemia, manifested in infancy by evidences of intestinal indigestion, colic, wasting, and alarming nervous disorders, including convulsions, and, in later childhood, by tardy development and various functional nervous disorders.

Colicky babies and infants, as well as older children, with severe chronic digestive disturbances, whose stools show distinct gas production, upon culture, are, in Doctor Bogert's experience, almost invariably benefited by cultures of lactic-acid-bacilli

given in frequent and full dosage. Undoubtedly, in the milder infections, diet alone—lowering of the sugar and fat percentage of the food—will suffice. The improvement, however, apparently is far slower.

On the other hand, subjects showing similar symptoms, but, no gas, have not, as a rule, responded.

SELECTING THE TIME OF PARTURITION

Believing that difficult and protracted childbirth labors are far more likely to occur when the babies are large, even when the pelvis is normal, and, since a 6- or a 7-pound baby not only is born more easily than a 10-pound one, but, does better after it gets into the world, James D. Voorhees (*Amer. Jour. Obstet.*, Jan.) prefers to have delivery occur a week or two ahead of time; indeed, he says that it is not unusual for him to try to "shake the apple off the tree" ahead of time by administering a dose of castor-oil and quinine, in that way selecting the most suitable time for labor to set in. It is remarkable, he declares, how often the administration of this combination is effectual. Occasionally, however, when there exists only a slight disproportion between the fetal head and the pelvis, but, trouble is feared, the author starts labor, either ahead of time or at term, by means of a modified Champetier de Ribes balloon.

In multiparas, who have had a previous difficult labor or who have lost a baby in a former confinement, without marked pelvic contraction, it is his custom to insert a bag one or two weeks before term, with almost invariably good results. Last year, he artificially induced 24 labors in this way without consequent fetal or maternal mortality. However, all women can not be managed in this way; the cervical condition must be favorable. If the cervix is rigid and if there is present uterine inertia, the whole process is slow and painful, the

outcome is uncertain, and there is more risk of infection.

In this manner, the records in the Sloan Hospital for Women (New York), as also in the author's private practice, have improved, in that labor was terminated more often without instrumental interference since the author adopted his present method. Incidentally, the author believes cesarean section to be a safe operation under recognized indications, although these indications are to be strictly limited and are not to include the desire of merely finding an easy way out of *any* obstetrical difficulty.

ORTHOSTATIC-LORDOTIC ALBUMINURIA

George E. Brown contributes a study of orthostatic-lordotic albuminuria, also called postural or cyclical albuminuria, to *The Journal-Lancet* for January 15. He finds that this affection is not rare and that its diagnosis is of greatest importance.

Every case of albuminuria in young adults should be examined into, to prove the existence or nonexistence of this type of albuminuria. Albumin in the day-urine, with its absence in an early morning sample, is suspicious. Similar other constant findings are diagnostic. Casts are rarely present. Dietetic treatment is not necessary. Correction of the existing lordosis, if possible, and prolonged observation of the patient cover the necessary treatment.

THE CONSERVATIVE TREATMENT OF ECLAMPSIA

The treatment of puerperal eclampsia in the New York Lying-in Hospital is described as follows by Ross McPherson (*Amer. Jour. Obstet.*, Jan.):

Immediately upon her entering the hospital, the patient's blood pressure is taken, a catheterized specimen of urine is secured, and she is put into an isolation-room, which is darkened and as much quiet as possible is obtained. She is then given, by hypodermic injection, 1-2 grain of morphine sulphate; her stomach is washed out; 2 ounces of castor-oil is poured down the tube at the end of the lavage; and, lastly, she is given a colonic irrigation of 5 gallons of a 5-percent glucose solution.

If the blood pressure exceeds 175, systolic, phlebotomy is done, and a sufficient quan-

tity of blood is extracted to bring the pressure down to 150, physiological saline solution not being injected. In the opinion of the writer, it is unwise to bleed the patient if the pressure is lower than 175, systolic, as, if for any reason a good deal of blood is lost during delivery, the pressure will be reduced so greatly that the patient may die of the shock. This same objection applies to the antepartum administration of large doses of veratrum viride.

The patient is now kept quiet, while 1-4 grain of morphine is administered every hour until the respirations drop to eight per minute. At this time, convulsions usually have ceased, the patient will have fallen into labor, and, as has happened in virtually all the cases, will be delivered normally or else by an easy low forceps application in a short time. Occasionally, the use of a little ether is necessary to control the convulsions while waiting for the effect of the morphine. The convalescence is treated in the usual manner, as indicated by the symptoms, and it has been significantly uncomplicated in the authors' patients.

Under this treatment, 55 cases of true convulsive toxemia have occurred with a maternal mortality of 9 percent—which is decidedly lower than the maternal mortality under radical treatment. The number of stillborn children amounted to 34 percent, a considerable reduction over the best figures quoted under other methods of treatment. Practically all of these stillborn babies were very premature or macerated. In no case that was at term or in which a fetal heart was heard on admission, did the morphine seem to make any difference in regard to the viability of the child.

This is interesting, because at the time when scopolamine-morphine amnesia was first in the lime-light before the medical public, one heard so much talk about the dangers of scopolamine-morphine amnesia, owing to the fact that morphine was being used. Inasmuch as the scopolamine-morphine-amnesia patients never got more than 1-6 of a grain, and that early in labor, whereas the toxemia-patients frequently get 3 or 4 grains of morphine during the course of their treatment, it seems necessary to refer to this point.

The author is convinced that the conservative treatment outlined by him is far more successful than the radical treatment. In

his opinion, operations, such as abdominal cesarean section, have absolutely no place in the treatment of convulsive toxemia of pregnancy, except in those cases in which the eclampsia is accompanied by a deformed pelvis or some severe disproportion between the mother and child.

VENEREAL PROPHYLAXIS IN THE UNITED STATES ARMY

The following directions for carrying out the system of venereal prophylaxis, as directed by paragraph 2, General Order 17, War Department, 1912, are reproduced from "Medical War Manual No. 1," (Lea & Febiger, 1917), entitled "Sanitation for Medical Officers," by Lieut-Col. Edward B. Vedder:

The genital organs are thoroughly washed with soap and warm water. Then an injection is made into the urethra of 4 mils (Cc.) of the standard solution of 2-percent protargol dissolved in glycerin 15 parts, water 85 parts. This should be retained in the urethra for three minutes. In individual cases, when the protargol solution is found to produce an irritating effect, a 20-percent solution of argyrol may be used. Other solutions or modifications of these solutions will not be used for routine administration.

The entire penis should be rubbed with calomel ointment (30 percent in benzoated lard), care being taken that the folds of the prepuce and about the frenum are thoroughly covered. If any pimples or abrasions exist about the scrotum or the pubic region, these should also receive an application of the ointment.

The parts should then be wrapped in a napkin of soft paper furnished for the purpose, in order to protect the clothing.

CHIONANTHUS VIRGINIANA. LIVER CONGESTION

The preliminary stage of the very frequent hepatic diseases occurring in the tropics, it is said, in "Mercks' Annual Report" for 1914, recently published, usually presents itself as a congested condition of the liver. Important as it is in such cases to care for the proper emptying of the intestine, yet, the cathartics usually employed are not adapted

for this purpose, for the reason that they contain aloes, jalap, resin, or scammony, remedies which rather congest the liver than otherwise. F. Roux (*Ind. Med. Gaz.*, 1913, No. 10, p. 394) believes that in the root-bark of *chionanthus virginiana* he has discovered a remedy which, without acting as a drastic cathartic, relieves the hepatic stasis and that of the portal system; while, at the same time, it is asserted to increase the volume of the bile secretions, in the sense that it increases the water content of the bile.

In order to secure a cathartic action or to assist the gently laxative action of the *chionanthus*, the author recommends the simultaneous administration of iris versicolor and the root-bark of *juglans cinerea*, whereby an ideal effect is obtained. The dose of the 1 : 5 tincture of *chionanthus* is, 1 to 15 mils (Cc.) or more per day. Of the fluid extract, prepared from equal quantities of the drug and 60-percent alcohol, 2 to 4 mils may be given two or three times daily.

MERCURIC CHLORIDE, AND SUICIDE

The department of health of New York recently published an interesting table of suicide deaths by poison, in that city, in which the various kinds of poison are mentioned that were utilized by persons to cut short their life period. While during the years 1907 to 1916 carbolic acid has been the favorite means of suicide—with a total of 323 cases, mercuric chloride with 155 cases, and cyanide with 153 cases coming next in order—the annual figures for mercury are especially significant and interesting.

It is to be noted that the use of mercuric chloride as a means of suicide increased with the increased publicity given by the newspapers to cases of accidental or deliberate use of mercuric-chloride tablets ending in death. The result was a virtual epidemic of "bichloride-cases." It is quite obvious that the reading of such news had a psychological effect upon the minds of some of the readers, with the result as seen. At any rate, it is asserted that there is now little need for further agitation on the subject of requiring mercuric-chloride tablets to be put in peculiar and distinctive shapes or in special containers. A more

sensible treatment of this sort of "news" by the press would, apparently, do more good than any ill-advised legislation.

THE GLYCERIN-BATH FOR STERILIZING INSTRUMENTS

Glycerin is warmly recommended by G. Seiffert (*Zentrbl. f. Bakt.*) for sterilizing surgical instruments, being free from the objection of the oil-bath, which leaves them more or less slippery. Immersion for one minute, at a temperature of 120° C., suffices to kill all microbes and spores—tetanus-bacilli, however, not being tested for. The instruments are rinsed in cool sterile salt-solution. Cutting-edges are not affected. Incidentally the author also states that the tubes of the Berkefeld water-filters can be disinfected in the same way—which, though, may not be advisable for laboratory purposes.

A TUBERCULOSIS PREVENTORIUM FOR INFANTS

A. F. Hess, of New York, in the January number of *The American Review of Tuberculosis*, reports on the work of an infant-adjunct to the Children's Tuberculosis Preventorium at Farmingdale. In the homes of over one-third of the children at the preventorium, there were infants for whose case no institution in the city could be found.

To test out the practicability of an "infantorium," an adjunct to the Farmingdale Preventorium with 12 cribs was opened. It was feared that mothers would be persuaded only with difficulty, if at all, to part with their babies for an extended period of time. However, in this country, in the large cities at least, the nature of tuberculosis is so well understood by the common people and its mode of propagation through contact constitutes such everyday knowledge, that it requires very little persuasion to convince a tuberculous mother that she is a menace to her infant and to persuade her of the advantages of separation, to the baby as well as herself.

During a period of two years 36 infants were admitted, varying in age from one month to one year. The mothers were the most active foci of infection. At first, tuberculous infants were admitted, but, the prognosis in these proved to be so poor that thereafter only infants with a negative tu-

berculin reaction were taken in, that is, a group not yet infected and, therefore, amenable to preventive measures. Of 28 such infants, 2 died of diphtheria, 2 of marasmus and 1 of enteritis. Diphtheria can be eliminated by means of the Schick test and a further reduction of mortality can be achieved by having a wet-nurse associated with an institution of this kind. Considering that most of these babies would have been infected with tuberculosis and died, the results are, by no means, discouraging. The ultimate disposition of these infants proved to be less of a problem than was anticipated and in only two instances was there any difficulty, one baby being retained over time at the preventorium and another almost two years old being returned to its tuberculous mother.

It is felt that this experience shows that it is quite possible to save the infants of tuberculous mothers, and a duty to provide for them. As it is now, they are abandoned to their fate and, indeed, are the only individuals who are left out of consideration in the tuberculosis propaganda. So, it is desirable to acknowledge that most of the tuberculous adults are doomed and to make a valiant start for the protection of the next generation, for the safeguarding of the newborn infants. Unless this is done, we are merely allowing another generation to be infected with tuberculosis and transmitting a heavy burden to our successors.

COPPER SACCHARATE (BENIFORM) FOR VAGINITIS

In parallelism with the saccharate of iron, various attempts have been made to produce a soluble compound of copper oxide and sugar, but not with any satisfactory result until a few years ago a chemist in Oesterreicher's institute at Berlin hit upon a suitable method and put the compound upon the market under the fancy name of beniform. In general, the process is vaguely described as follows:

Cuprous hydroxide is dissolved in an alkaline solution of bioses, then neutralized with an aqueous solution of an organic acid, then the solution is evaporated to dryness, and, finally, the dry product of copper saccharate is purified by dissolving out the admixed organic salts of the alkali by means of an organic solvent. The

"biose," or disaccharide, may, of course, refer either to saccharose, maltose or lactose or to a natural mixture of the first two. The product is neutral and permanent.

While the astringent action of copper upon mucous tissue is well understood, it is asserted in favor of this new compound that it also combines the antiseptic and disinfectant properties of plain sugar. While one may somewhat doubt the applicability of the latter fact to the combination, clinicians who have employed this so-called beniform speak very highly of it in the treatment of vaginitis (acute and chronic gonorrhea); for instance, W. Schoenitz, of Nagel's Polyclinic at Berlin, who has used it extensively for that purpose.

In reporting on his experience (*Ther. Monatsh.*), he also quotes Kuehn in this connection, who relies upon the conversion of sugar, introduced into the vagina, into lactic acid, which in these catarrhal conditions always is diminished. But, lactic acid is inimical to numerous pathogenic germs.

Ordinarily, the patients are directed to irrigate the vagina three times a day with a solution of 1-2 to 1 ounce of the beniform powder in 1 quart of lukewarm water, while once a day they visit the office, when about 1 ounce of the dry powder is dusted over the entire surface of the vaginal tract. Unpleasant effects never were observed.

POPULAR FALLACIES REGARDING INFANTS

There is dominant in man a peculiar psychology, corresponding to what we call inertia of matter, which causes us to oppose innovation and to cling to customs that have ruled us for many years or generations. It is, perhaps, natural that old people should be more conservative than the younger ones, and less inclined to break with old habits and take up new things. This is true, particularly, in the time-honored ceremonial that pertains to the reception of a new citizen born into the world. As, formerly, the "wise woman" and, later, the midwife took charge of the infant, starting it on its journey through this vale of tears, so now the neighborhood nurse or other kind woman or even a trained nurse

deals with the baby in ways brought down from olden times. Thus, immediately after birth, the baby is taken away, usually to the warm kitchen, and bathed and bundled up; and it is lucky—in some environments—if the doctor can prevent the little unfortunate one being dosed with a sip of whisky or at least of sugar-water.

Many of the practices enforced upon the newborn infant are wrong, so we are assured by Dr. Walter Reeve Ramsey (*Minn. Med.*, January), who deplores the fact that tradition still plays so prominent a part in the care of children. First of all, he rejects as a common error the belief that newly born infants must be bathed as soon after birth as possible, claiming that this practice is responsible for many deaths. Especially where babies were born after prolonged labor, where they have been subjected to considerable exposure in the process of artificial respiration, as also for other reasons, the loss of body-heat necessarily following upon bathing or sponging of the body results in a subnormal temperature, with, necessarily, a marked lowering of vitality, possibly followed by an attack of pneumonia.

According to Doctor Ramsey, a newborn infant should be rubbed with warm oil, wrapped in warm blankets, then allowed to remain from twelve to twenty-four hours in a uniform temperature of from 75 to 80 degrees. This, surely, is a reasonable plan, when it is remembered that the baby has been accustomed to an intrauterine temperature of 100° F. and that the change into the lower atmospheric temperature should be rendered as little of a shock as possible.

In the process of bathing or of washing the baby, it is customary for the attendant to remove, by vigorous rubbing, the protecting layer of the vernix caseosa; and it is this process, as well as the use of improperly neutralized soap, that results in the diffuse intense redness of the skin, amounting to an actual dermatitis, that so frequently is encountered after the second or third day.

Another fallacy is, that the mouth of the infant, beginning with birth, should be swabbed daily. Doctor Ramsey holds that this is, perhaps, the most common cause of stomatitis. He asserts that the gauze used for this cleansing removes portions of the delicate epithelium, which, thereupon, gives

rise to the formation of white patches of exudate. The mouths of infants, he declares, do not need swabbing—unless they already are diseased—until the teeth come through; after which these should be brushed every day.

The practice of putting the baby to the breast every two or three hours during the first day also is declared a mistake, and responsible for many obscure failures in nursing. The colostrum is laxative in character, and usually, although not always, scant in quantity. In cases in which infants are fed at frequent intervals during the first days, a diarrhea with curdy green stools often occurs. A dyspepsia that occurs at the onset often results in a marked intolerance to food, which is difficult to overcome and frequently leads to weaning.

The common practice of ordering a dose of castor-oil for the baby on the third day can not be too strongly condemned; its effects are more or less irritating, and it sweeps the intestinal canal clean, so that no natural movement can logically be expected for several days, since the secretion of milk scarcely has been established at that time. Owing to a lack of knowledge on the part of all concerned, the first dose of the oil usually leads to a second and third, to be followed by enemas and suppositories when the bowels fail to move on the succeeding days. Eventually serious intestinal irritation is set up, with frequent green, curdy stools. After a short time, the milk is adjudged "bad" by the physician and the baby is weaned.

Enemas and suppositories should almost never be given young infants. Breast-fed babies may go several days without a movement without disadvantage, and if allowed to do so will rarely suffer from constipation. The stools of breast-fed infants are rarely even semiformed, so that enough effort will be made to produce an evacuation when enough fecal matter has accumulated in the rectum to produce sufficient stimulus.

The idea prevalent among physicians, that many mothers can not nurse their babies, is false. At least 90 percent of mothers can nurse their babies in whole or in part for the whole or a part of the first year. Because a mother has insufficient milk, is no reason for weaning the baby. The child should be given all she has and the remainder of the needed nourishment made up

with properly modified cow's or goat's milk. The failures in nursing nine times out of ten are due to faulty technic and disobedience of most fundamental rules.

There is, practically speaking, no such thing as bad breast-milk. A baby that is having frequent green curdy stools on breast-milk has simply been having "too much of a good thing."

ARTIFICIAL FEEDING OF INFANTS

Regarding the artificial feeding of infants, Dr. Walter Reeve Ramsey, to whose interesting article reference was made in the preceding abstract, declares it a false idea that cow's milk or any other food, patent or otherwise, can be juggled in its percentages even to approximate human milk in its effects. Milk of the mother or a wet-nurse being lacking, he declares clean cow's milk to be the best substitute. [We have a personal predilection for goat's milk.—ED.] Any food that has not milk as a basis is a dangerous nutrient for infants if given for any length of time, and it frequently gives rise to rickets.

In disagreement with the common belief, that the curd of cow's milk is the element most difficult to digestion, the author declares that this is true, rather, for fat, many cases of malnutrition in infants being produced by overfeeding with fat. In such a case, the babies, when put on a fat-free diet of carbohydrates, usually improve rapidly.

The acute intestinal diarrheas of infants during the summer months as a rule are the consequence of overfeeding and are primarily an intoxication, but, having nothing to do with teething—contrary to what grandmas and some physicians would have us believe.

It is not correct, in the author's opinion, that infants should be fed wholly upon milk for the first year; indeed, under such feeding, infants ordinarily are pale, flabby, and lacking in tone, while the children will be in much better condition where given some extra food after the sixth or seventh month. After the first year, the child should have a good mixed diet, although this may be supplemented by milk in a limited amount.

The almost universal idea, that heating or boiling of milk destroys or at least injures it seriously as a food for children, is also an erroneous one. Pasteurizing at 160° F.

or boiling the milk for three minutes does change it somewhat, but, does not seriously detract from its food value. When boiled milk is given, some uncooked fruit or vegetable juice should be given daily. That milk is one of the carriers of disease, has now been definitely proved, and no cow's milk is wholly safe as a food for infants unless it first has been properly pasteurized or boiled.

The giving of sweets, in the form of candy, in any amount is, contrary to the popular idea, usually injurious to children, especially if given between meals. Sweet things stimulate a craving for highly seasoned foods that tickle the palate, rob the children of their appetite for the plain things upon which their nutrition depends, and frequently set up gastrointestinal disturbances.

LIMITING THE SIZE OF THE BABY

James D. Voorhees (*Amer. Jour. Obstet.*, Jan.) can see no particular cause for boasting of unusually large children. Not only do oversized children with large hard heads unduly increase the severity and strain of labor, which usually is prolonged, but, also, they themselves suffer, since the molding of the head in the bony pelvis may cause serious injury, while, even, normal delivery may be altogether impossible.

The author believes that the size of the baby can be limited before birth. After the sixth month, the amount of carbohydrates in the woman's diet should be cut down and the diet should contain, largely, proteid material. In addition to this, the author recommends two measures as making labor more easy. The first is, long walks during the pregnancy. The idle and pampered dislike to walk when having a motor-car at command. These patients lead a hot-house life. No wonder that their babies grow large and ride high above the pelvic brim! No wonder that the women's muscles are flabby and that inertia and fatigue occur during labor. With exercise, red blood, good muscular tone, and endurance

for the supreme test of labor, all these contribute toward a more easy and successful outcome.

The second measure is, a snug-fitting corset worn during pregnancy, but, it must be comfortable. By its use, not only is the patient's appearance more presentable, but, also, when properly applied, it drives the child's head into the brim more early in pregnancy. In this way, molding of the head is accomplished long before labor begins. What happens without this support, especially in short-waisted women? The women look enormous, the belly is pendulous, and the fetal head is pulled away from the axis of the brim, and, often, abnormal presentation results.

Since a 6- or 7-pound baby is born more easily than one of 10 pounds, and, moreover, such a one does better after it gets into the world, the author prefers to have a baby born a week or two ahead of time, especially in a primipara, because, ordinarily, this means a quick and simple labor. He even resorts to correcting the course of nature by inducing labor at the time selected by himself, provided that conditions are favorable. In this manner, he has succeeded in delivering several multiparas of living children, when the previous confinements had been unsuccessful.

ETIOLOGY AND TREATMENT OF SCIATICA

According to J. Csisky, of Budapest (*Deut. Med. Woch.*), sciatica results from habitually incorrect, more especially unsymmetrical, sitting upon improper surfaces, whereby frequent or prolonged harmful pressure is exerted upon the sciatic nerve. The prevention of this painful affection as well as its partial or complete cure is implied in the statement of this theory. A positive suggestion offered by the author is, to pass a hot flat-iron (preferably electrically heated) along the course of the painful nerve, increasing the temperature as fast as the patient can bear it.



Miscellaneous Articles

Studies on Food Economics

X.—Cereals and Panification

[Continued from February issue, page 149]

ABOUT the Different Grades of Flour.—Now, this gluten is located in greater amount just inside the bran coats from which it is not readily detached in milling.

Gluten being of a darker tint than starch, gives a certain amount of color to white flour. To enhance its whiteness, the large milling concerns have been in the habit of subjecting flour to a bleaching process, thereby injuring its quality.

The most nutritious flour is not white, except by contrast with that which is of more color.

Just here, the reader is warned against entertaining a widely accepted fallacy, namely, that a dark flour necessarily is a more nutritious flour.

As stated before, the gluten next the bran coat is very hard to detach from its adhering bran, hence, in the milling-process, more or less bran gets mixed with the resulting pollen. This must be separated by means of the bolting-cloth, and it is called shorts or middlings—a very nutritious feed for stock.

The best and the most nutritious flour is one having a very light cream color. Such flour is best obtained by what is called high milling. It is described as follows by Professor Horsford:

"The reduction of the wheat by the process of high milling is one, step by step, and the separation of the products is not alone according to the magnitude of the particles, but, also, according to their specific gravity.

"If one rubs grains of wheat gently between millstones, which at first are one-twelfth of an inch apart, then one-quarter less, and then one-half less, and so on, there is obtained successively a finer and finer product."

Professor Horsford goes into much detail, to show how the object of high milling

is to obtain the inner contents of the grain, and as much of the outer gluten-cells as is possible, and in a fine powdery condition, while eliminating the coarser particles and the bran coat. By this process, much gluten is lost to the flour, being retained on the bran coat.

Now, the outer coats of grains, or seeds, are perfectly indigestible, at the same time they are irritating to the alimentary canal. They also readily ferment when subjected to the action of heat and moisture, and undergo putrefaction, with the evolution of foul gas.

Fashion has decreed that flour shall be white. White flour means loss of gluten and, as a consequence, loss of phosphates.

By careful analysis of the husk only, we find that it is but 5 percent of the weight of the whole grain. Now, as it takes about 270 pounds of wheat to produce one barrelful of flour by the ordinary milling-process, we have (or should have) a loss of but 13 1-2 pounds; whereas, the actual loss amounts to between 50 and 60 pounds.

Of what does this loss consist—what element or elements are thus wasted from man's use? It is the gluten!

How can we make good this loss in our ordinary diet?

We remember how, some thirty years ago, while investigating and writing on the subject of wheat, we obtained specimens of the whole wheat so prepared that it was to be placed in a mason jar in amount sufficient to half-fill the jar, the remaining space being left for the water to be added; after which the jar was placed in a saucepanful of water and slowly cooked. When well done and eaten with milk, this made a delicious and very satisfying meal of great food-value.

A man by the name of Everett prepared this whole wheat and put it on the market, but, the enterprise not being a financial

success, he went out of the business, and no one since has taken it up.

Many proprietary foods have been put upon the market, that claim to overcome the difficulty caused by this loss of gluten, some of which we favored from time to time, but, clinical experience of every-day life has convinced us that they fail in a most important particular. Yet, most of them do not fail to put money into the pockets of their proprietors.

Our conclusion is, that good wheat-flour, supplemented by oatmeal or cornmeal—either in the form of porridge or mush or as cakes, can well take the place of whole wheat-flour as to nourishment, and will not subject one to the injurious action of the bran coat of the wheat.

Corn pancakes are not bad to eat, and good corn fritters, made with the addition of flour, eggs, and milk, are as fine a food and as wholesome as can be prepared for man—add some good dairy butter and Florida syrup, and you have a food that cannot be excelled for nutrition and flavor.

It was corn feed that built up American manhood and enabled it to surpass the world in initiative. In these days of high prices, a return to the simple food habits of our daddies will enable us to keep the wolf from the door.

When *corn* is cooked and eaten while it is young, its flavor is most desirable, and, owing to its outer skin, or bran coat, being thin and not irritating as the bran coat of wheat, it can be ground, and, may be retained in the meal. It is much more easy of digestion than the whole meal of wheat. Besides its use as bread, as stated above, it can be made into delicious puddings with the addition of eggs and milk. It is known in Ireland as stirrabout and in Italy as polenta.

Corn has recently supplanted millet in the food of the Kaffirs. Corn, termed umbila, is placed in a covered earthenware cooking-pot, with a little water, over a wood-fire, until it is partly softened. It is then pounded and rolled upon a flat stone until it is made into a soft paste or porridge (*isicaba*), in which state it is eaten with a wooden spoon, and with sour milk.

Corn, being rich in gluten, sugar, gum, and oil, it is a very strong food both for working men and live stock.

Another fact (stated before) is, that the corn, in its preparation as meal, does not

part with any of its gluten. Owing to the larger proportion of nitrogen which it contains, it is a more stimulating food than is wheat-flour, so that, when it is a constant food of horses (not hard worked), it is liable to produce disease.

As a food for man, it is slowly making its way in popular estimation. Formerly in England, it was used only as food in jails and poorhouses; likewise in Ireland.

Corn can be consumed in a variety of ways and forms, and, while a necessity to hundreds of millions of people, in a limited sense, is a luxury and a very agreeable food to selected classes of people.

Corn-meal varies in color with the variety of corn from which it is made. It should feel perfectly dry and powdery. It does not "lump" when pressed in the hand, and it has a characteristic pleasant odor. When decomposition has begun, the meal has a rancid odor, and will turn moistened blue litmus paper red. Good meal has no effect upon the color of litmus paper.

Oats, or *avena sativa*, is grown in comparatively low temperatures, whether in reference to latitude or elevation. The grain is larger and its nutritive qualities are greater in the climates of elevated regions than in lowland districts. The husk is particularly hard, so that it not only is somewhat difficult to break, but, unless it be broken, the gastric juice can not act upon the inside kernel, and it will pass through the body of man or animal undigested. It also is furnished with long sharp spikes, which are liable to become fixed in the folds of the intestines and to accumulate in large masses in the bowels. Hence, the necessity of crushing the oats before feeding either to man or beast.

The proportion of the husk to the rest of the grain is one measure of its value, since inferior grain has a small kernel and much husk. In America, 32 pounds to the bushel is considered the standard. In Great Britain, it is 60 pounds to the bushel.

There is a principle existing in oatmeal called *avenine*, which is a tonic in its nature.

The kernel, and the pollen into which it is ground, are really the digestible and nutritive parts.

Oatmeal is a very strong food and one that requires much cooking in order to break its starch-cells, but, when it is well cooked, it thickens milk or water more than

will the same weight of wheat flour. The longer oatmeal is boiled, the more digestible it becomes.

Corn-meal used to be a cheap food, but, the demand increasing for its use and the supply not keeping pace with the demand, it now has become the dearer food of the two.

A. T. CUZNER.

Gilmore, Fla.

KILL THE RAT—FOR FOOD CONSERVATION

The Bureau of Biological Survey of the U. S. Department of Agriculture has sent out a placard with the above caption, the text of which is as follows:

"By spreading fatal diseases, the rat has killed more people than bullets have. The rat is just as filthy and dangerous as ever, the most destructive and dangerous of animal pests. While America is trying to feed the Allies, this pest annually destroys food-stuffs in the United States worth \$200,000,000. Poison rats! Trap rats! Never let one go! Make houses, stores, granaries, elevators rat-proof. For practical methods of destroying rats, apply to the U. S. Department of Agriculture, Bureau of Biological Survey, Washington, D. C."

The problem of conserving the available food supplies at the present time is concerned with the destructive habits of the rat far more now than under former conditions. Of all the parasites that have their being in and around the habitation of man, the rat has less to justify its existence than any other. As devoid of any redeeming traits as the fly, which has been the subject of a nation-wide sanitary crusade, the rat is a greater pest, because of its depredations and its possibilities for harm in the transmission and perpetuation of bubonic plague in a community. The latter consideration is of more serious import in seaport towns, wherever they may be, and in those localities where plague has once appeared; but, with the world-wide march of bubonic plague, its advent should not be considered as improbable in any city.

In *Public Health Reports* for July 4, 1913, a very instructive article on the sanitary menace and the economic burden imposed by the rat may be found discussing the injury wrought by rats to foodstuffs and supplying information concerning the best

methods of exterminating this pest. Lantz also has written on the rat and its relation to public health, this article being published as "Public Health Bulletin No. 30." The data following were excerpted from the former article.

Concerning the ever present and continued commercial drain, the author says that it is impossible to assign any accurately fixed sum to the amount of injury done by rats in the United States, but, estimating the loss at a rational minimum amount, the total is astonishing. The calculation embraces two factors, namely, the census of rodents and the average amount of damage done by one rat. Both these factors can be determined within reasonable limitation.

It has been calculated that the numbers of rodents in the United States is at least equal to that of the human population, and probably greater, while in our insular dependencies—the Philippines, Hawaii, and Porto Rico—where the cane-fields are especially overrun with rats, the rodent population undoubtedly exceeds the human population by several times.

The annual upkeep per rodent was computed by some authorities at \$1.80 in Great Britain, \$1.20 in Denmark, and \$1 in France. Judging from the large number of complaints made by American farmers, in writing to agricultural journals, the depredations of rats in this country will exceed the estimate made in Great Britain. One-half cent per day would be a conservative estimate, however. The same figure can safely be placed on the damage caused by the city-rat.

Lantz, in the "Public Health Bulletin" referred to, cites the following specific cases of rat depredation. Presumably they were selected as random:

An Iowa farmer writing to an agricultural journal reported that rats had destroyed in one winter about 500 bushels of corn of a total of 2,000 bushels stored in cribs. Another farmer reported that rats had robbed him of an entire summer's hatching of three hundred or four hundred chicks, and still another one computed his loss in grain and poultry, for one season, due to rats as sufficient to pay his taxes for three years. Lantz further quotes a Washington merchant to the effect that rats gnawed a hole in a tub containing 100 dozen eggs and within a period of two

weeks carried away 71 dozen, without leaving either shell or stain.

Because the rat is an animal of nocturnal habits, its depredations often pass unnoticed or are ascribed to other sources. Computing the upkeep of the rat as one-half cent per day and estimating one rat to each person, the sum of \$167,000,000 annually is found to be lost to the country by the thievery of these pests.

A ratless country seems almost Utopian; still, much can be accomplished in preventing this unnecessary loss and in safeguarding the country from any possible plague invasion, by a concerted and well-sustained nation-wide crusade against the rat; similar to the "swat the fly campaign." No sporadic or individual efforts will suffice, however.

The extermination of rats is not nearly so easy as fly destruction.

An adult rat will, on an average, produce young six times yearly, with from 6 to 12 young in each litter. There have been known cases where a fullgrown female rat littered twelve times in one year. A rat can reproduce when only three months old. This remarkable fecundity, together with the instinctive secretive habits of the rat, which, being an animal of nocturnal habits, lies hidden during the day and is active during the night and while its human foe is asleep, readily accounts for the large rat population in any locality and emphasizes the difficulty of rat destruction.

Rats can be destroyed by trapping, by poisoning, and by making use of natural enemies, such as certain breeds of cats and dogs. To insure success for these measures, it will be necessary to curtail the rat's food supply, by properly disposing of garbage and table refuse and by preventing rats from gaining access to such food as is contained in pantries, groceries, markets, stables, and other stores. The municipal government will have to assist the efforts of citizens in this work by creating and enforcing suitable ratproofing laws.

Along with other measures for the destruction of rats, all buildings, chicken-yards, garbage-receptacles, sidewalks, and planked areas must be built or repaired so as to make them unsuited for the harboring of rats. Buildings should be made ratproof by elevating the structure, with the underpinning open and free, or by marginal ratproof walls of concrete or by means of

stone or brick laid in cement mortar, sunk 2 feet into the ground and fitting flush with the floor above. Suitable precautions against rat harborage and for the protection of food supplies, in connection with careful trapping and poisoning, will be attended with considerable success toward the destruction of rats.

As to trapping and poisoning, it may be stated that the efficacy of these measures will depend not so much on the kind of poison or on the pattern of the trap or on the bait, as upon the method of placing the poison and traps. The larger the wire-cage trap, the better the results. It goes without saying that both the snap-traps and the cage-traps should be made substantially, the latter having the wires well reinforced.

Trapping is preferable to poisoning, for the reason that the results are accurately known, whereas, in poisoning, the result is always a matter of conjecture. Both methods should be employed, however. For the individual householder, any of the poisons obtainable in open market and which have arsenic, phosphorus or strychnine as the active ingredient, will be effective, but, they must be employed intelligently.

The Bureau of Biological Survey, Department of Agriculture, at Washington, offers every assistance for all undertakings intended to destroy the rats in any individual location, and its aid should be freely solicited. Moreover, every practitioner should constitute himself a committee of publicity and sedulously spread among his community the information at his command and urge prompt and *unremitting* application of all available measures. Everybody should procure the Bulletin furnished free by the government.

THANK YOU, DOCTOR

When the January number of your most excellent journal reached me, I could hardly realize that you were celebrating your "Silver Anniversary," for, it does not seem very long since I was the glad recipient of "THE ALKALOIDAL CLINIC," the modest, inconspicuous pamphlet, and I can now well remember that those pages were as full of readable matter to the busy doctor as are those of the present well-grown AMERICAN JOURNAL OF CLINICAL MEDICINE.

I remember well that my esteemed friend Dr. J. B. Strachan, who has since passed

over the river, asked me whether I had ever seen a copy of THE ALKALOIDAL CLINIC, and, how, when I told him that I was a satisfied subscriber and got inestimable benefit for the money it cost, he remarked, "I think that Doctors Waugh and Abbott are two of the very finest all-around physicians in the United States, and I do not believe their superiors can be found, and but very few equals".

I want to congratulate you most heartily on your "Silver Anniversary" and to assure you that I am still the same admirer of your present very-much enlarged, "modest, inconspicuous pamphlet" and read it both with pleasure and profit, and that my appreciation grows with each issue that comes to my home.

There are many things I should like to say, but, as this is my first, and for fear that I may intrude upon worthier space, I again extend my sincere congratulations and say to Doctor Abbott that I, too, believe we are fighting the Seven-Headed Beast—as an article contributed by me to our greatest state daily, a few days ago, fully bears out.

Wishing each one who is helping to make your journal the very best that can be made lengthened years of success and usefulness, I am, sincerely yours,

WILL B. CRAWFORD.

Goldsboro, N. C.

[Thank you, doctor. We appreciate all the nice things you say.—ED.]

COMPULSORY NOTIFICATION OF PREGNANCY

In Switzerland, a law is observed that compels physicians and midwives and unmarried women, to notify the health-authorities when pregnancy is detected. The intention is, to safeguard the mother and child, by securing proper prenatal and safe obstetric care and particularly to prevent illegal operations. Of course, women who desire untimely and illegal operations are, perhaps, not likely to comply with the law, still, statistics seem to show that the law has had at least a deterring effect. At a meeting in November of last year of the American Association for the Study and Prevention of Infant Mortality, Dr. A. B. Emmons, of Boston, made a similar sug-

gestion as to compulsory notification of pregnancy. Some such measure is greatly to be desired in this country, where vital statistics suffer greatly, because of the neglect of reporting births.

To leave this procedure to the voluntary action of the women pregnant out of wedlock, has, in my experience, proven a failure. Mothers have come to me repeatedly with the request to help their entirely innocent daughters, even when conscientious questioning would elicit that the girls themselves had no intention nor knowledge that there was anything else planned except securing seclusion maternity care and are perfectly willing to submit to my plans, until their own mothers would upset my arrangements. The New York authorities would not assist me, either, since no law exists requiring anybody to report a suspected or attempted crime.

Considering that present conditions must urge us even more than ever before to look after these girls and give them all possible protection, it is incumbent upon the medical profession to find a mode of handling the cases that come under our attention.

In a few cases within a period of two years, I at least have succeeded in obtaining the introduction of the prospective father and the satisfaction that both the young people would take out and sign licenses for marriage; but, I did not succeed in obtaining the support of the authorities.

Here, personal liberty certainly runs to licentiousness. The military authorities, also, seem to be powerless to interfere, as my latest case has shown. A few months ago only, in New York City, after I had arrived at what I believed to be a complete success, the young people, having at my request signed the marriage-license application, finally telephoned, asking whether they could now "take their own course" and, when I insisted that they must call on me again, that "I had report," and after I had the literature of the foremost and absolutely best reliable seclusion maternity home of the country sent them and that institution had corresponded with the girl's parents, I could not induce them to accept my point of view, so that I am fully convinced that they have, by this time, taken the "easy way". The only military officers who could have helped me (the young man

being in an honorable position in the U. S. Army, but, with small salary), after some discussion, assumed an indifferent attitude, which made me desist from my plan of submitting the young man's name.

Now, what are we going to do? There will be identical cases in the experience of other physicians.

My original proposition, approved of by the New York Medicolegal society, in one of its stated meetings, to place such a young woman under strict observation, preventing her to escape her maternal duties, falls to the ground, by reason of the restrictions that would be laid upon her personal liberty.

Had I not succeeded in a few previous similar cases (seven, in my recollection), I should despair that we shall ever approach the solution of this problem.

E. H. F. PIRKNER.

New York, N. Y.

LUMINAL IN DRUG-ADDICTION

I am very much interested in the note of explanation by Doctor Price as to his experience with luminal as a remedy in morphine-addiction (this journal, January issue, page 72). He says he took it himself, besides sixteen others, with not a single failure or relapse. This is exceptional and to me a most wonderful report. I have had some experience with the elimination and so-called "knockout" treatment with hyoscine and strychnine, as originated by Dr. George E. Pettey, of Memphis, and very highly recommended, in the January number, by Dr. W. R. Wallace, also of Memphis, Tennessee. This same treatment has been investigated and sustained by men high up in the profession, and I do not feel qualified to criticize their findings. However, what I have seen I know.

For my part, I believe that hyoscine is a dangerous drug. Doctor Potter's "Materia Medica" says that: It is liable seriously to derange the mental faculties . . . and is probably responsible for many of the impaired intellects which emerge from the so-called "bichloride of gold cures." I am sure that many who have taken the hyoscine-treatment can corroborate this latter opinion. I can, for, I have taken it twice, and know whereof I speak. I do not think that I could ever be persuaded to

have anyone administer this drug to me again.

I do not doubt but that improvements have been made on this method of treatment and perhaps some permanent cures been effected. However, I am convinced that the efficacy of the remedy can not be sustained by the experience of all.

Doctor Price says that luminal is the only remedy worth while. I do not wonder at his saying so, for, it seems to have cured him so effectually and, he says, permanently. He also declares that, after addicts have taken this treatment "they never crave another dose of the narcotic." This is, certainly, not true of any other remedy of which I have knowledge.

No one could enlist in a greater, more humane work than that of assisting in the releasing of unfortunate habitués from the thralldom of one of the narcotic drugs. Oh, the horrors of it and the utter hopelessness of the victim to be released from it. The awful nervousness brought about by the withdrawal of the drug and the consequent craving that really has become a second nature has brought many of these slaves to an untimely and awful death, on account of being deprived of it by the adoption of the federal antinarcotic law. I want to know more of the character of luminal, and that soon.

Best wishes for the continued success of CLINICAL MEDICINE.

J. L. B.

—, Ga.

[Luminal is very closely related to veronal, both synthetics depending upon barbituric acid as their hypnotic constituent; veronal being the diethyl-barbituric acid, while luminal is phenyl-ethyl-barbituric acid. In other words, one ethyl group (C_2H_5) of the two ethyl groups in the veronal has been displaced in the luminal by one phenyl group (C_6H_5). They also are, constitutionally, described, respectively, as diethyl-malonyl-urea and phenyl-ethyl-malonyl-urea. Both these acids form readily soluble salts with alkalis, the monosodium salts—veronal-sodium (or medinal) and luminal-sodium, respectively—being commercially recognized.

The standard dosage of luminal is from 2 to 5 grains, with a maximum of 12 grains. The soluble, hygroscopic luminal-sodium must

be prescribed in 10 percent larger doses (6 grains). Hypodermically, though, its dosage is given at from 1 1-2 to 5 grains.

These data, and much more information, may be gleaned from "New and Nonofficial Remedies" of the A. M. A.—a book, by the way, the successive editions of which ought find a prominent place in every doctor's library.—ED.]

CHRONIC PROCTOCOLITIS, INTESTINAL AUTOINTOXICATION, AUTOTOXEMIA, AND THE TREATMENT

The normal act of eating is usually accompanied with a gluttonous delight, while in defecation there is no pleasurable sensation. There is an almost constant impulse to eat food, but, none for the normal act of stooling. Gluttony fills the upper end of the gastrointestinal tube, while chronic glut fills the lower portion. Stool at any time you feel like it is fool's advice to a foolish self-poisoned person. Nine-tenths of the human ills can be traced to the symptoms of intestinal autointoxication and systemic autotoxemia. All this means chronic stasis, or constipation, of all the tissues of the body and their inability to eliminate the stored-up toxic substances (as indicated by a harsh, dry skin, anemia, disturbances of the mucous membrane), and thus an extra burden for the kidneys and other organs of the body.

Proctocolitis is a universal disease and usually is traced to the wearing, by an infant, of a toxic diaper. Childhood and youth also furnish conditions for the inception of proctitis.

To understand the gravity of proctocolitis, one has to take into consideration the anatomy and physiology of the diseased organs, as well as the abundant fatty tissue surrounding them, with their anatomical relation to other pelvic organs; also the very long period the chronic disease has existed, while all the while invading and destroying tissues far away before its existence is diagnosed.

The normal amount of feces and the time for their expulsion each day has not received the sufficient study demanded by the subject, hence, no occasion to make examination for proctocolitis. The torpid liver and intestinal atony have been the

constant cry. It has not occurred to the mind of the gastroenterologist to make, with one inhabitant whose lamentations they have heard, an excursion down the whole length of the river that drains a microcosm.

About forty years ago, I made excursions up the drainage-system of very young and of old microcosms, and have continued to do so ever since, but, have heard no "Hello!" or echo from the *per-os* explorers. They are still in the bile, atony, neurasthenia, and acid territory of the cosmos. I am still in hopes of meeting them and shaking hands as fellow procto-gastro-enterologists.

Chronic proctocolitis, owing to its invasion of all the tissues of the organs and of the neighboring tissues during twenty, forty or more years, is a fearful disease of the most important organs of the body. Its many extremely severe and annoying local symptoms, coupled with the many distressing bodily and mental symptoms, disturb all the functions of the system, owing to the lack of normal elimination from all the organs and tissues of the body.

Inflammation of muscular tissue causes contraction of the muscles. So, what must occur to a muscular tube, more or less flexed and bent upon itself, but contraction of its muscles, thus, closing its bore and inhibiting the normal passage of feces and gases, making self-poisoning inevitable, because of foul, putrid, imprisoned feces and gases as well as the absorption of the inflammatory exudates into the system.

Proctogastroenterologists should consider it their first duty to convince the layman that his gastrointestinal apparatus ought to be treated as a dairyman treats his milk-bottles, that is, having them always perfectly clean before each new supply is put in. Convince him that it is a good investment in a hygienic mine, from which he will draw the spirit of vim, vigor, snap, push, health, joy, and happiness.

At college one of my professors on surgery made the following apt comparison, in speaking of a sick doctor and a lame dog: "The Hindus have a saying that, if you tell the truth for twelve years, you will have the power to manifest it. Is it possible that a sick doctor never has told the truth to his patients, and is, therefore, unable to demonstrate it?"

In the October number of *The Medical Council*, Dr. George M. Niles (author of a

textbook on diagnosis and treatment of digestive diseases) contributed an article in which he gave thirty-nine favorite prescriptions for gastric and systemic foulness. The great number of useful prescriptions for systemic foulness seemed to me like a large armamentarium to bring about a hygienic state of the system. That article induced me to ask a patient of mine to bring to me all the prescriptions he had received from various doctors whom he had consulted for constipation, indigestion, et cetera. Being able to bring me but one hundred prescriptions, the man apologized for not bringing me at least one hundred and fifty more that he had received in the past few years.

Two hundred and fifty favorite prescriptions for this particular case is a very interesting collection. What his very first physician should have examined him for was, chronic proctocolitis, as the symptoms of intestinal autointoxication and systemic autotoxemia were self-evident in him, as they usually are in all humans.

Doctor Moran made the following remark to me, in his office, the other day: "The day has gone by when you can look at a patient's tongue, then prescribe some remedies." I have full confidence in our tried remedies, from the fact that I know their psychic, dynamic effect, if the right remedy for a disease is properly used. A doctor is a disgrace to the healing art when he adopts a makeshift treatment for symptoms and accomplishes no more than getting his fee.

For about forty years, I have been aware that chronic proctocolitis means toxic foulness of all the digestive and eliminative organs, as well as of the whole system. With the right diagnosis, the treatment must be the best. Now, just ordinary, everyday gumption would suggest the queen of hygienic remedies, that of aqua destillata properly used, to remove the cause of its many symptoms, as the remedy over all else.

Over three decades ago, I made plain the reasons for the use of the enema two or three times a day. Professor Gatenaria, of Pavia, Italy, invented an enema-apparatus at about 1490, and its use became the fashion of the day; but, without the knowledge that proctocolitis existed, the use of the enema was, like a host of "remedies,"

a mere makeshift effort to overcome symptoms of a disease not diagnosed. Hence, the nihilism in the healing art up to the present time.

The enema-water at a temperature of 90 to 105 degrees properly injected into the large intestine is by far the best means of dislodging and flushing away ancient feces and gases and of cleansing the mucous membrane of the gut. It dilates the diseased, contracted gut invaded by chronic inflammation, induration, cicatricial tissue, and ulceration, permitting the imprisoned feces and gases to escape with the least amount of irritation over the diseased canals. This hygienic measure should be applied two or three times a day with a greater or less quantity of water as the case may demand.

There are some dozen objections to the enema, but these I have answered in my book entitled "Intestinal Irrigation."

There is another use I make of water, in treating chronic proctocolitis, and so far I have heard of no objections to the use of the wonderful remedy; still there will be when novices attempt its use.

I devised a perfect instrument for the use of water at a temperature of 125 to 150 degrees, which is held over the diseased tissues of the organs for five to ten minutes, then expelled, but at once applied again. This is continued for an hour or more, without removing the anorectal point through which the water enters the bowels and returns. The treatment is accomplished while sitting on a toilet-seat. It may be used twice a day, or only in the evening if the patient is employed during the day. In the water used, there may be incorporated oil or any other remedies of a depurant nature that one may wish to use.

Hot water at a temperature of 120 to 134 degrees is antiphlogistic, antispasmodic, antiseptic, antacid, antifatulent, and anodyne, producing a restful state of body, like-wise sleep. It softens cicatricial and indurated tissue, equalizes the circulation of the blood, stimulates secretion and excretion. It is astonishing how much mucus, shreds, casts, and other impurities the hot water causes to be discharged during and after the hour's treatment. Water at a temperature of 140 to 150 or more degrees will cause wakefulness for about two hours,

if taken before going to bed; but, there will be a delightful feeling following its use. I think the detergent effect, on the system, of hot water at the temperature named, is wonderful over the period of time it is used. It evidently releases the impurities from the system, as well as those generated by the local disease, and to a great extent prevents the detritus from entering the system while the cure is progressing.

I am amused when I read of chronic proctocolitis being cured in three weeks or in one or two months' time. I am perfectly satisfied if I can effect a cure in two years or even in a longer period of time. It is a curable disease, under the proper local treatment, if the home treatment is faithfully followed.

While the local treatment to the diseased bowels goes a long way in preventing and relieving the chronic intestinal autointoxication and systemic autotoxemia, there are other aids that will assist in restoring the normal action of the skin, and I recommend cabinet, Russian, and Turkish baths for that therapeutic purpose; also, the drinking of two or three quarts of water in the twenty-four hours, for the purpose of irrigation.

I have said nothing about diet, for the reason that a clean tube from os to anus gives a clear passport to food that goes down, and to the waste that goes out in a hygienic manner.

The mind of man can never be clean and clear while ancient feces and gases make turmoil in the large intestine and finally invade all the tissues of the body. His incarnate life is cut short by the spirit-inhabitant's serious objection to an Augean armor and instrument (the body), which is quite useless for its object and purpose in this aborted incarnate expression.

ALCINOUS B. JAMISON.

New York, N. Y.

[Doctor Jamison's treatment for proctocolitis, with all its attendant ills and sequels, resolves itself into the copious and persistent application of water—from below and from above. The advisability of creating an enema-habit has been questioned; yet, it may be objected that it is better to be clean, as to the intestinal canal, by mechanical means—even if these have to be used all the time—than not to be clean at

all. What is the experience of the "family" in this respect? The subject is important—more so than is commonly conceded. Let us discuss it freely and thoroughly.—ED.]

CHANGING THE ANTINARCOTIC LAW

The amendment to the Harrison Antinarcotic Law proposed by Dr. H. Sampson is absurd; we have reports enough, as it is, to make out. If the law is to be amended, it should be for the better. A few examples: Why should we be required to report the amount of Dover's powder or the very small amount of cocaine in "throat" tablets or of codeine in "anodyne for infants"? Frequently I leave a grain or a grain and a half of morphine with my confinement cases; why should such small amounts have to be recorded?

L. J. GRAVES.

Russellville, Ala.

SOME EMERGENCIES IN A COUNTRY PRACTICE

By emergency, one usually means an ailment that most times is relieved at one visit. The first case out of my own experience that I will relate is that of a woman (Negro) about 55 year of age, who, with her husband, came a distance of four miles to my office, in the night. She had eaten pig's feet for supper and two of the little bones stuck in her gullet in such a way as partly to close the trachea. She tried to get relief by swallowing warm salt-water and mustard-water, but, nothing would go past the obstruction. Something had to be done to give relief, of course, as respiration was much interfered with. I could not reach the bones either with the finger or the pharyngeal forceps, and no probang was at hand with which to push them down into the stomach. I thought right away of apomorphine, and, so, injected 1-10 of a grain hypodermically. In about five minutes, the woman became deathly sick, emesis took place and, with it, out popped two tiny bones. I charged five dollars for my trouble, and this was paid willingly.

Another, somewhat similar, case was that of a man, 60 years of age, whom I went seven miles to see. In eating his breakfast, a fish-bone had lodged in his esophagus,

and he could get it neither up nor down. The bone, I found, was well down in the gullet and could not be reached by way of the mouth. I had no probang, so, did what a country doctor often has to do—resorted to a makeshift. I called for a peach-switch, trimmed it smooth, then tied a piece of cloth tightly around one end. By means of this artifice, the bone was pushed into the stomach.

Another emergency-case was one of superficial scalding in a man of 60 years. His daughter was preparing a hot foot-bath for him and, after pouring boiling water into the tub, left the room to fetch cold water to add to it. Thinking that the water was ready for him, the father put his feet into it, with its dire consequences. Naturally, the pain was intense, so, he sent to me for something to give relief. I gave the messenger a 1-percent solution of picric acid and some tincture of opium in a menstruum of olive-oil. The first application relieved the pain entirely and in a short time his feet were all right again.

On a number of occasions, I have used, for burns, and scalds, picric acid in a 1-percent solution of water or of linseed-, olive- or cottonseed oil. The only drawback to its use is, that it stains everything touched by it to a deep lemon-color. It relieves pain and promotes healing.

Then there was the case of an 80-year-old Negro, who had an enlarged prostrate gland—so enlarged as to cause complete retention of urine. He was on his hands and knees on the floor and was suffering greatly from bladder distention. Neither a soft catheter nor a metallic one could be insinuated past the prostate gland. As he had to have relief, I drew his urine suprapubically with trochar and cannula. This was done at about dark. Next morning, I called again and succeeded in passing a rubber catheter. This occurred before pituitrin came into use, and I have been wondering whether an injection of it would have emptied the bladder, if injected near it.

The last case I shall relate is that of a mule—worth \$150.00 at that time. A wart on the posterior aspect of the mule's right fore leg, near its junction with the trunk, had been sliced off, as a result of which the animal was bleeding to death, a jet of blood following every heart beat. Happening to pass by, I was appealed to. However, home

was two miles distant and I did not have with me a hemostat or anything else with which to stop arterial bleeding. However, I thought of a procedure, that our professor of surgery told us about, when nothing better was at hand. I asked for two large sewing-needles and some No. 8 thread and inserted the needles under the bleeding wart at right angles to each other and then clamped them with the thread. The bleeding stopped at once. The owner of the mule willingly paid me \$5.00 for my services.

A. P. McARTHUR.

Moss Point, Miss.

[The New Standard Dictionary defines emergency as "a sudden or unexpected occurrence or condition calling for immediate action, a perplexing and pressing combination of circumstances; sometimes, less properly, used in the sense of urgent need or exigency." There is nothing to indicate that an emergency usually is relieved at one visit; indeed, it may have consequences demanding continued attention.

Our correspondent's experiences demonstrate the necessity of quick and correct thinking on the part of the physician when dealing with such unforeseen conditions. Regarding the case of the old man with retention of urine, we doubt that pituitary extract would have relieved him, because of the fact that the retention was mechanical, being due to an enlarged prostate. One effect of pituitary extract is, diuresis; but, there was here no deficiency in the renal function. The difficulty was in voiding the accumulated urine; and, for this, pituitary extract hardly would have served, in our opinion.—Ed.]

WHERE ARE ALL THE PIGGS?

Dear doctors, readers of the journal: You cover this country pretty well, especially the western and southern portion. Before skipping this item, hearken to me a few hearkens, listen to my tale of wo. I am sure you can help me. Therefore, consequently, to wit, let me say: I am writing a History of the PIGG FAMILY in this United States of America.

Like the lost tribes of Israel, we Piggs are scattered to the four winds. Almost in every country south and west you will

find our tribe. No doubt, you have them on your books. Usually they are good pay. Send me their addresses or, better still, have them write me. Many have already done so, but, many, alas, will never hear of me and what I am doing, unless you tell them. I will do as much for you when I can. I make no money out of it. This is my hobby, and for it I buy many stamps and waste much time that I should devote to medicine.

W. B. PIGG.

Henryetta, Okla.

[Indulgence in a hobby is exceedingly likely to cost much in stamps and time. Usually, the good wife tells one that both could, and should, be employed to better advantage, only, friend husband is liable to be obstinate and does not see any reason why he shouldn't have some fun. Just like he used to feel, when a boy, if he could not have what he called "fun"; no matter whether mother or sister called it—well, differently. We hope that many physicians will happen to know of a great many members of the Pigg family and that they will communicate with our correspondent. We always have a warm spot for hobby-chasers—so many unkind remarks are being made about our own hobby.—ED.]

WINTER SOUTH

For at least ten years the writer has spent at least a part of every winter on the coast of the Gulf of Mexico. Usually, we left the north when we were heartily tired of the cold and discomfort. Although having experienced it many times, we have never yet been able to rid ourselves of an Aladdin-like impression when we get to New Orleans. Taking the Illinois Central at Chicago, when snow and ice abound, not the slightest evidence of Spring approaching, and we have really had about all the winter we feel called upon to endure, in twenty-six hours we step off the car in the great southern city to find the green grass flourishing in the parks, the palms, the stately magnolias, clothed in the full panoply of green, the deciduous trees bursting into full life, and flowers everywhere, roses and violets perfuming the air. It is another world.

But when we say "winter south," we are not often referring to the pleasure of it,

great as this may be, but rather to its value as a preventive of disease and prolonging of life. An instance; one of our friend patient's families have proved to be exceedingly liable to colds. They seemed to contract catarrhal conditions with unusual facility. This had occurred so often with one of the children that it was evident he was fast developing a chronic bronchitis which would have rendered him an invalid for life and have shortened that life considerably. For years we urged these friends to go south for the winter, but, conditions were such that they did not feel justified in doing so. This year, however, when the colds began to set in earnest, they did go down to the Gulf coast, and we have just received advices from them telling of the results. Firstly, they are so charmed with their winter home that they say, never again will they think of winter in the North. The colds have practically stopped, and the chronic bronchitis has disappeared almost completely. They now write that they realize why I so persistently urged this move upon them in former years.

There are hundreds and thousands of northern families to which this applies with equal force. They would winter south if they only knew, but, they don't realize that living is on the whole very much less expensive there where they can draw supplies from their kitchen garden during every month of the year, where the fuel spent in warming a northern home would pay all the expenses of traveling to and from the Gulf, and where the saving in health, in worry, in anxiety and in discomfort, are greater than could be realized until one has the experience.

It is up to the doctor to familiarize himself with these conditions, and to make them known in his clientèle who need just such wintering.

WM. F. WAUGH.

Chicago, Ill.

"CHRISTIAN SCIENCE HORRORS"

May I ask the privilege of referring to an article, in your January number, entitled "Christian Science Horrors," in which a medical doctor from a western state unjustly charges Christian Scientists with letting people die for lack of medical attention, and urges the medical profession

to secure the enactment of laws that would prohibit Christian Science practice.

The doctor overlooks the fact that people in vast numbers in every part of the world are relying on Christian Science, because they have found the practice of medicine uncertain and because medical treatment has failed to give them relief and health. The occasion of his attack was the sudden death of a person under Christian Science treatment, from a disease which, according to the Chicago health-commissioner, caused a mortality of a little over 10 per cent, in Chicago, during the year 1917, of the total number of cases of this disease reported by Chicago doctors. These figures might well furnish occasion for interesting comment if one were disposed to adhere to the lines followed by our medical critic.

Christian Scientists, however, have only the greatest respect for the humane labors of the medical profession and their religion teaches them not to disparage nor scorn those who are trying to alleviate human suffering.

When the Doctor indicates that every day the newspapers report a death due to neglect on the part of Christian Scientists, that their practitioners are brutal and skeptical and do not heed the convictions of others regarding contagion nor obey the laws requiring the reporting of diseases pronounced contagious, he clearly forfeits claim to serious consideration, for, it would be difficult to make statements more absurd and untrue.

No one will deny that in a case of only forty-eight hours' duration a medical diagnosis may be, and frequently is, erroneous and mistaken, and Christian Scientists are reasonably entitled to charitable judgment under such conditions. Prominent physicians, themselves, on various occasions have called public attention to the uncertainty of medical diagnosis.

In November, 1915, Dr. Charles H. Mayo, of Rochester, Minnesota, said before the Chicago Medical Society: "A report from the Bellevue Hospital shows that in over 50 percent of all autopsies, extending over a considerable period of time, the diagnoses were incorrect, both as to medical and surgical cases."

Christian Science is God's healing power, as practiced successfully by the Master,

who used no drugs, herbs or material medicines of any kind.

In its issue of January 20, 1918, *The Chicago Examiner* says editorially: "There is no doubt whatever that, what Mrs. Eddy's Science has done to help human beings in controlling false fears, greatly outweighs anything that the practical scientist may allege as to the neglect of the realities of disease."

Christian Science is being judged favorably by countless thousands who know it by its fruits in conquering sin and in healing disease of every sort, organic as well as functional. In healing by prayer, Christian Scientists are practicing religion—and religious freedom is guaranteed by law. If the time shall come when Christian Scientists shall be in the majority in any given community, they never will wish to force their healing-system upon anyone; so, in their turn, they only ask the right to individual liberty, in accordance with the Golden Rule taught by the Master.

WALTER H. VAN ZWOLL.

Chicago, Ill.

[We have no hesitation in conceding space to this reply by Mr. Van Zwoll, of the Christian Science Committee on Publication for the State of Illinois. We hope, however, that this may not open the door to controversy, believing that this would not serve any good purpose.—ED.]

NAVY'S CALL FOR BINOCULARS, SPYGLASSES AND TELESCOPES: "THE EYES OF THE NAVY"

The Navy is still in urgent need of binoculars, spy glasses and telescopes. The use of the submarine has so changed naval warfare that more "EYES" are needed on every ship in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also required urgently.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and, as no stock is on hand in this country to meet the present emergency, it has become necessary to appeal to the patriotism of private owners to furnish "EYES" FOR THE NAVY."

Several weeks ago, an appeal was made through the daily press, resulting in the

receipt of over 3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. This number however, is wholly insufficient, and the Navy needs many thousand more.

May I, therefore, ask your cooperation with the Navy, to impress upon your subscribers, either editorially, pictorially or in display, by announcing, in addition to the above general statement, the following salient features in connection with the Navy's call:

Articles should be securely tagged giving the name and address of the donor, and forwarded by mail or express to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor, will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course, impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefore, one dollar will be paid for each article accepted which sum will constitute the rental price, or in the event of loss, the purchase price, of such article.

As this is a matter which depends entirely for its success upon publicity, I very much hope that you will feel inclined to help the Navy at this time by assisting in any way that lies within your power.

FRANKLIN D. ROOSEVELT,

Assistant Secretary of the Navy.

Washington, D. C.

[We are glad to print this appeal, hoping that many of our readers may be able to help out in strengthening the "eyes of the Navy."—ED.]

IN THE MATTER OF PHYSICIANS' LEASES

This committee wishes to announce that advice has been given to the daily press that Senate Bill No. 2859, providing a moratorium for soldiers and sailors during the war, has unanimously passed the Senate in the same form that it passed the House.

We urge you to advise your readers, and also the medical societies to have the members immediately procure a copy of this bill

and see how it applies to the subject of physicians' leases.

This committee has worked for the passage of this bill, and we feel that we have accomplished what we started out to do, and trust that relief will be given the doctors who join the service.

R. R. DENNY,

Physicians' Lease Committee of the
Chicago Rotary Club,

Chicago, Ill.

THE PRESENT TREATMENT OF PNEUMONIA AS COMPARED WITH THAT OF OUR FOREFATHERS

We have read two articles lately on pneumonia, one written by a Chicago physician, the other by a New Englander. Both of these writers are badly tainted with medical nihilism, for, they both assert that there has been no improvement in the treatment of pneumonia over that of fifty years ago, and one of them declares, in proof of his assertion, that the death rate has not been reduced over that obtained by our forefathers. The other writer acknowledges that the death rate has been somewhat reduced, but he holds that "this gain has not been due to any improvement in the medical treatment, but was the result of physicians learning to do as little as they could and give nature a chance to cure the patient."

We want it understood that we do not agree with either statement, "that the mortality in pneumonia is as great per capita as it was fifty years ago," or even twenty-five years ago, and, "that the treatment in pneumonia has not improved in this time." We want to say that the treatment has been greatly improved upon and, consequently, the death rate has been lowered proportionately. The claims of these two writers may be true for certain localities where the old modes of treatment are still in vogue or in places where the practice is done by medical nihilists calling themselves doctors. The old practice of giving pneumonia-patients large doses of calomel, tartarized antimony, and carbonate of ammonia is, certainly, no longer practiced. We are glad to say that, so far as we know, they have long since been replaced by remedies of precision and remedies that aid nature's processes to combat so formidable an en-

emy as pneumonia. These oldtime remedies as prescribed years ago, have no place in the up to date treatment of this disease. There may be occasion in certain cases—but, they evidently are few—in which these antiphlogistic agents, if intelligently prescribed, will do good; but, as a rule, they do harm, and there is no doubt in our mind that this oldtime depressing treatment has been a secondary cause, at least, in keeping up a high death rate in this serious disease.

We have just read an article in which the author writes: "Carbonate of ammonia in the treatment of pneumonia has and is still sending its victims by scores to a premature grave. Yet, we find more than half the practitioners prescribing it in pneumonia." Just how much of this statement is true, we can not say, but, from our experience with carbonate of ammonium, the picture is very much overdrawn. While we have not prescribed it for a long time in this disease, yet, when we did during the first years of our practice, we certainly believed we got results, at least we do not remember of losing a patient in whose case there was any reason to believe that death was due to the administration of carbonate of ammonium, which is criticized so severely by the author quoted.

In those days, we prescribed it only after the temperature had fallen to normal or below, and in those cases in which the forces of nature were very much reduced; in the young, and those greatly debilitated. It was given to stimulate the respiratory centers, causing the patient to expectorate freely; in other words, to increase the expulsive effort of the cough and thereby prevent the bronchials from becoming hopelessly blocked up.

Do not give this drug with a view to increasing the secretions, for, it will not do it, but, do give it when the bronchi are full, drowned by phlegm, to aid the patient to get it up. We have often prescribed the aromatic spirit of ammonia in these conditions, in place of the carbonate, and with equally good results; and we believe the benefit derived from these agents lies in the fact that the general blood pressure is increased and the circulation in the respiratory mucus membrane is, therefore, accelerated. To this improvement of the pulmonary circulation, is due the improvement

we see following the administration of these stimulant expectorants.

Another writer says: "It now would be a good thing if all the medical works written up to within the last decade were burned and their ashes strewn to the winds of the earth; it would actually be better for humanity. It now almost appears to be true that when a doctor fails in practice he writes a medical work."

How far this assertion is true, we do not know, but, we have always been able to get much valuable advice from any of the standard works we have read. What, if these older writers did recommend blood-letting, blistering, tartar emetic, carbonate of ammonia, and so on, it was the best they knew; and, I do not doubt that one hundred years hence our ancestors in the professions will criticize our present treatment and our methods as much, if not more, than we have those of the men who blazed the trail for us to follow.

If you will pardon the digression, I want to say that I know of no better therapeutic agency in the treatment of acute lobar pneumonia than bleeding, if you know how to discriminate in selecting the patient and know when it should be resorted to. To bleed in a certain class of cases, would be nothing less than manslaughter. To bleed in the other class, *after* the proper time had passed, would mean the same thing.

There is one particular in which we have gone ahead of our predecessors, and that is, that we have learned to discriminate; we have learned that we can not treat all patients alike. We have learned to treat the sick man instead of the name of his disease. In pneumonia, as in every other disease, there is a departure from the standard of health, and, to cure the patient, we must correct this physiological departure.

In trying to learn the curative value of drugs, we must discriminate wisely and prescribe the right remedy at the right time.

If in pneumonia we have a pulse wave that is full and throbbing as if a coarse cord were striking your fingers, then you prescribe *veratrum*; if in the next case there is the small, rapid, tense pulse as if a fine wire drawn tight were striking your sense of touch, give *aconite*. Should we have associated with the small wiry pulse a flushed condition of the face, hot head,

bright eyes with contracted pupils and great excitement, combine gelsemium with the aconite, or should the opposite be present, you know the remedy—belladonna.

For pleuritic pains, bryonia is the remedy of choice. Should you find a heavily coated tongue, with a white or yellowish-white sticky substance, give sulphite of sodium; but, should you encounter a dark-red congested tongue, with or without coating, the mineral acids are in order. If to the above plan of treatment we give our patient with pneumonia nuclein and calcium iodide, to increase the production of antibodies or to counteract the toxins generated by the pneumococcus (which is the same thing) and use heart stimulants as indicated, we have, to our mind, the best treatment up to date.

But, the medicinal is only part of the treatment; the longer we practice, the stronger grows our faith in pure air for pneumonia. Put a neat-fitting, cotton-batten jacket lined with silk on your patient. Use plenty of warm covering, throw open the windows and let the pure air come in, avoiding drafts, of course. Add to this the proper dietary, and you have a plan of treatment that should save from 95 to 98 percent of your pneumonia patients.

Before bidding you adieu on this subject, I want to give you my views and what I practice with references to feeding pneumonia-patients. Several years ago, I heard a professor who stood high in the profession say that, in feeding pneumonia-patients, he made few changes from that in health and allowed the patients' cravings to be his guide in feeding them; that the patient did not have a disease of the stomach, but, of the lungs. This, perhaps may do in very mild cases, but, in the genuine article, as you often see it, it is wrong, and you will lose your patient if you follow it in its broad meaning.

For the first few days, I allow barley-water, diluted fruit-juices, albumen-water, and buttermilk. I allow my patient his choice out of these. If the patient does well then, in three days, I allow him some dipped toast, zwieback, a little rice, well-cooked, and a few raw oysters, if he likes them, if not, then a soft-boiled egg. As the condition improves, there can be a gradual return to a normal diet. Sometimes, if the case is unusually severe, with

high temperature, I withdraw all food for twenty-four to thirty-six hours, and I have never regretted it. It is safer not to tax the digestive organs.

Now, I have, from time to time, cases that are quite out of the ordinary class. These are the children and the aged, in whom there is so much gastric disturbance that the dieting becomes quite a difficult problem. Last winter, I had two such patients with pneumonia. One was a woman 67 years old, who had suffered more or less from gastric trouble all her life; the other was a man 74 years old, who was feeble beyond his years. Both of these subjects had a long-drawnout convalescence, because they could not be fed, and the few simple things they could take failed to give them the necessary strength. I attribute these patients' recovery to three remedial agents, namely, aromatic spirit of ammonia, nuclein, and trophonine.

If you are ever put to the wall, as I was in these three cases, try these three agents. Put your patients upon trophonine, if you can not feed them enough to nourish them properly, and keep them on it until they gain strength sufficient to digest and assimilate other food. Give plenty of it. When you do this, you need not give so much stimulant, for, the alcohol in this preparation often will be sufficient. All physicians are aware that, as nutrition of the patient fails, the power of resistance diminishes and, unless you overcome this, you will find yourself on the losing side.

C. W. CANAN.

Orkney Springs, Va.

SODIUM CACODYLATE IN PNEUMONIA

Some time ago, Frank H. Wright, D. V. M., of Brooklyn, New York, spoke to me about the virtues of sodium cacodylate as a remedy in the treatment of pneumonia, and of the "marvelous" reaction following its use in the case of horses and dogs, in which he had found the temperature to recede to normal within forty-eight hours, and that, without the aid of any other treatment, a second dose (injection) rarely had been called for. This induced me to give this remedy a trial, and the result in the four cases in which I have employed it have been so satisfactory that I desire to recom-

mend it for investigation by the profession at large.

In the first case, that of a child of four months, I gave 1-4 grain of sodium cacodylate subcutaneously on the third day, and the temperature was normal on the fourth day of the disease.

The next case was that of a child of 1 year, I injected 1-2 grain on the fifth day and another 1-2 grain on the seventh. The temperature was normal on the eighth day.

The third case was that of a man 57 years of age. He received 3 grains of sodium cacodylate subcutaneously on the third day. His temperature was normal on the fifth day.

The fourth was that of a man 78 years of age. A subcutaneous injection of 3 grains of the cacodylate administered on the fourth day brought the temperature down to normal on the sixth day.

It takes more than one swallow to make a summer; but, inasmuch as my veterinary friend claims to have obtained such excellent results in more than eighteen months of observation among his animal patients, I believe that sodium cacodylate should receive close observation in pneumonia in humans.

L. P. A. MAGILLIAN.

Brooklyn, N. Y.

THE CLINIC'S FIRST ISSUE AND ITS LAST ONE

I am just in receipt of a sample copy of your journal (a reminder of old times). It certainly is a fine journal. After reading it over carefully, I hunted up volume 1, and found that it comprises 185 pages. Some change! The first article in volume 1, number, is "Aconitine, Shallers." I am glad that I learned to use aconitine through that article. Never regretted it. Why? Because it brought results.

I learned to use veratrum viride from Professor Brainard, of Rush. Good old veratrum; that is, if you get a reliable article.

Well, Doctor Abbott brags about the journal being twenty-five years of age. Ho, ho! I beat that all hollow—on February 5, I have been in harness fifty years. Armed with a diploma from old Rush—fifty years of honor. Proud of the diploma and old Rush.

T. C. MURPHY.

Pass Christian, Miss.

KNOCK OUT THE HEL

There's one kind o' knocker that's bound
to succeed,
We've got several million, an' more if we
need,
They're comin' in droves, with their chins in
the air,
An' in a short time they'll be "over there"
To knock all the hel out of Wilhelm.

The boys o' this nation are "mad" as can be,
Because o' that fellow just over the sea
Who thinks he can lick 'em; but, they all
"guess not"
An' are joinin' the army an' navy, red-hot,
To knock all the hel out of Wilhelm.

They say that he's plannin' to "boss" all
the earth,
An' 'll back up his bettin' for all that he's
worth,
But, when he gets through with this rumpus,
he'll see
That somethin' has "happened," for we certainlee
Will knock all the hel out of Wilhelm.

Uncle Sam's on the job an' the time's drawin'
nigh
For us folks to "butt in" an' to make the fur
fly;
When Sammy's riled up and gets a good
start,
He never backs down an' 'll sure do his part
To knock all the hel out of Wilhelm.

Then, "Here's to the Knocker" we all like
to see!
When the Red, White, an' Blue from the
"Land o' the Free"
Gets into this action, then somethin' 'll drop—
Just watch how those "rookies" go "over the
top"
To knock all the hel out of Wilhelm.

HOMER CLARK BENNETT.

Lima, O.



In the World War

MILITARY ANTITUBERCULOSIS PROGRAM

Plans for a complete program for the prevention of tuberculosis in the Army have been perfected by the National Association for the Study and Prevention of Tuberculosis, working in cooperation with the surgeon-general, the Y. M. C. A., and other agencies. This, it is predicted, will put the impending second draft on a better health basis than the first one. The program will include, not only a followup for every man discharged on account of tuberculosis, but, a thoroughgoing health-educational campaign among the soldiers themselves.

Prior to the first draft, the National Association began to outline a preventive campaign. Owing to the magnitude of the task and the many practical delays in perfecting and applying the details of this scheme, the results were not as encouraging as might have been expected. This was due to the fact that the report of names of men rejected by the draft on account of tuberculosis was inadequate, the slowness of the machinery in getting under way, and the many difficulties in determining the status of the men.

Inasmuch as these enlisted or drafted men do not become accepted soldiers until after their probationary period of from three to six months in the various services, the Government assumes no responsibility for the after-care of those whose health breaks down during that period. Hence, this problem belongs to the civilian boards of health and the unofficial health-organizations.

The National Association program falls into two main divisions—the followup work and the educational work. The first obstacle to the followup program was section 11 of the Selective-Service Regulations regarding the second draft, which forbids giving a record of a man's condition to

anyone except certain designated officials. The National Association officers, however, placed before the War Department the importance of this work and were influential in persuading them to open the records of rejected men to state and local boards of health throughout the country, through the intermediation of the United States Public Health Service and the Council of National Defense.

Inasmuch as the above section of the regulations does not apply to men dismissed from training-camps after they have passed draft-boards, the Association arranged with the surgeon-general and the division-surgeons in camps to receive the names of all men thus dismissed. These lists are divided up by states and forwarded to state associations and state boards of health, for followup work. Where men are referred to localities where there are not at present facilities for this followup work, the Association will use its good offices to promote the establishing of such facilities.

In the meantime, the medical department of the Army has perfected its machinery for weeding out these tuberculosis cases. Every man passed by the draft-board, after going into camp, is examined by the regimental surgeon, reexamined by a tuberculosis-board, and then, if suspected of tuberculosis, again examined by a tuberculosis-expert. This follows a general policy mapped out and recommended by the National Association.

A large number of men have already been accepted into the service who were known to be tuberculous, many of them formerly inmates of tuberculosis-sanatoria. Part of the Association's work has been to get in touch with every tuberculosis-sanatorium and -dispensary in the country and compile lists of all recent male inmates of draft-age, giving the history of their cases and whether or not it was known if they were in the army at present. Hundreds of such names have already been received.

These data are forwarded to the training-camps, the men are located, and the results are reported back to the sources of information.

Furthermore, the Association has sent a letter to all of its fifteen hundred local co-operating agencies, giving the provisions of the second draft and urging that these agencies procure the names and addresses of all the men of military age in their section who are known to have tuberculosis; get in touch with these men and arm them with the necessary affidavits to prevent, if possible, their being passed by the draft-board, and recommend to the local draft-boards the names of the approved tuberculosis-experts in their section.

The Association is also cooperating with the surgeon-general's office, to aid the Government in providing sanatoria for those men who have been discharged from the service on account of tuberculosis after their probationary period has expired. All fullfledged soldiers and sailors returned from France or other stations will be cared for as near to their own homes as possible in sanatoria accommodations provided by the Government. The Government intends to utilize, as far as possible, existing institutions.

From the United States Marine Corps, the National Association has secured each month a report of men rejected, because of tuberculosis, from all its recruiting stations, and these men will receive the regular followup attention.

From the second, or educational, division of the program, it is hoped to derive the greater ultimate good, by the establishment of fundamental preventive measures among the well.

The National Association is interested in any kind of educational campaign, among the men in the various military camps, that will tend to promote interest and information with regard to the control and prevention of communicable diseases and toward the promotion of public and individual health in general.

In the mobilization of such large numbers of men in various camps throughout the United States, there have occurred an unusual number of somewhat serious epidemics of colds, coughs, pneumonia, measles, and various other respiratory and communicable diseases. That all of these

diseases can be controlled by education and by the exercise of adequate public-health measures, has been clearly demonstrated in the civilian population throughout the United States. Most of these epidemics are spread through ignorance and carelessness. It is inevitable where large numbers of men from all walks of life and suffering from all possible diseases and variations of physical habits are thrown together in somewhat uncomfortable and crowded living-conditions, that there will be an immediate increase in the amount of sickness from communicable diseases. It must be obvious, however, to even the most superficial observer, that, if these men can be taught to maintain a reasonable standard of personal hygiene and can be given a knowledge of the methods and principles of the control of communicable diseases, a rapid diminution in the sickness rate will follow with certainty.

In cooperation with the education committee of the National War-Work Council of the Y. M. C. A., the National Association will furnish a number of stock lectures dealing with tuberculosis, together with lantern-slides to illustrate them. It will also arrange to put the educational secretaries of each of the camps in touch with public lecturers in and around their respective camps. The Association has requested the War Department to give careful consideration to the desirability of appointing one or more special officers detailed, to lecture on tuberculosis and allied health-subjects, in all of the army camps throughout the country for the instruction of the soldiers.

The Association has prepared a special circular entitled, "Red Blood," giving in brief and attractive form a message to the soldier relative to personal fitness, a health "Don't Card"; and a Public-Health Manual may also be distributed, the latter being a textbook of personal hygiene, but written in popular language.

The Association also will arrange to distribute, through the departmental executives of the Y. M. C. A., a number of special tuberculosis-exhibits, known popularly as The Parcel-Post Exhibit. In connection with these, moving-picture films and lantern-slides will be used.

The National Association field secretary, Doctor Pattison, is visiting the training-

camp and supervising this educational work.

PHILLIP P. JACOBS,
Assistant Secretary.

New York, N. Y.

TO THE DOCTORS' WIVES WHO ARE LEFT BEHIND

I wonder whether there are other doctors' wives who find themselves eagerly searching the pages of *CLINICAL MEDICINE* for something encouraging in the war situation for the medical man who has offered his services? And the good part is, we almost always find it.

My husband is one among many others who has tendered his services and gone



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Hospital Corps in Training 'Mid Winter Rigors.

forth on his mission of mercy, to do his bit for humanity in this greatest of all conflicts. When he first made known to me his plans, I resented it. I felt hurt that he would think of leaving me and our two little ones, when he did not have to. Later, I begged him not to go; however, he was firm. He had the larger, broader view, while I was selfish. I was not willing to sacrifice him so that he might serve others more nobly. Now I admire the spirit in him that says, "I'm ready and anxious to serve my country in this most critical hour." To serve one's country, is an honor

and a privilege that all true Americans should desire.

Although I am most pleasantly situated in my father's home, I am very human; so, of course, often grow very blue. There are no other "war-widows" in my town or vicinity. I should enjoy getting in touch with some other lonely doctor's wife, so



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Soldiers Who Cannot Fight, Can Knit.

that we might "fight it out together," for, misery does love company.

I intend to keep up Doctor's subscription for *CLINICAL MEDICINE* during his absence. Really, I think that I enjoy reading the *Journal* almost if not quite as much as he. I shall also forward him some of the most interesting numbers.

It seems to me the doctors are being called upon to make the greatest sacrifice of anyone in this war, as practically all other married men are exempted, while on the other hand, the majority of the doctors who go are leaving wife and children behind. The blessing, however, will be in proportion to the sacrifice we make. So, let us cheer up and encourage our men in this noble work they have undertaken. Let us pray unceasingly that "He, who doeth all things well," will be with them constantly and in His own good time will bring them safely home.

A DOCTOR'S WIFE.

[We are glad, very glad, to print this letter. The war is a war of and for the wives and children as much as it is of and for the men, and, of course, for our country. If doctors are called upon to make unusually great sacrifices—and, we do not deny this—what about the doctors' wives? All honor to them! Let some other doctor's wife, or

many of them, write to us. If you wish to respond to the desire of our correspondent to hear from you, being similarly situated, we shall take pleasure in forwarding your letters. The columns of *CLINICAL MEDICINE* always have been open to you doctors' wives; they are now, and very much, at your service.—Ed.]

FROM AN M. R. C. TRAINING CAMP

There are a thousand and one things one could write about and that you and your readers would like to know, but, we are somewhat restricted in what we may tell,



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American Hospital for Officers in London.

so that it becomes necessary to scratch around like a hen for a topic.

Thus far, this has been one of my greatest experiences and not for anything, certainly not for money, would I exchange the knowledge already gained in this military experience. It always was one of my pet beliefs that when a man got into the army his identity and personality was lost. That's a mistake. The way a man is tagged and classified, is really something quite wonderful. It reminds me of some kind of hopper made of a series of sieves that get finer and finer, into which things are all thrown and gradually sifted down to the finest. So, here we go through the sifting-process until we finally emerge stripped, as it were, to the bone, devoid of pretense and with nothing left but our own natural abilities, to show where we be-

long. You know, and so do I, that in the beginning a lot of men who courted publicity, like some second-rate actress, got into high places, because, seemingly, of an inability somewhere to distinguish between notoriety and ability; but, like everything else, time seems to be righting this matter.

Perhaps you, like myself, were a bit cynical. Of course, not on the surface, but deep down in your heart there was a suspicion that our army was not going to be all that could be desired. Banish any doubt whatever that you may yet have on that score. At the rate things are going now, the armies of this country are going to be the finest body of men, mentally, morally, and physically, that ever have existed in the world. Not a month goes by but that some kind of a board comes along with a fine tooth-comb and rakes out the mentally and physically unfit, and I dare say that it is a matter of common knowledge that these boards are no respectors of person. As usual, the medical man is playing a tremendous part in all this, and, again, as usual, it is being done in such an unobtrusive way that only those who are of it can get any idea of the magnitude of the work that our profession is doing and how well and thoroughly it is being done.

Time does not permit of my going into details as to how the sick are being handled, except to say that the men who are attending to the curative side of the work are on their toes, so to speak, every minute of the time to do everything possible in the most scientific manner. All in all, it strikes me that we are doing this thing immensely well. Of course, there are some weak spots; as for instance, they have not as yet recognized my own superior qualities to the extent of giving me a promotion, which would add a few more rubles to my salary; still even that may be forgiven, considering that very probably ten thousand other men entertain similar sentiments. Trusting that this finds the *CLINIC* staff in good spirits (worth \$8.00 a quart here—"moonshine"),

W. F. VON ZELINSKI,
Camp Wheeler, Macon, Ga.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from February issue, page 171]

WE will begin, provisionally, with Aristotle's theory, for, it is, obviously, the correct one, as far as it reaches back. That is, we will, for the moment, premise the existence of the body, as does he. For, it is self-evident that, given the body, thoughts proceed from it, even though we do not admit that the body generates thought; holding, though, that the body is a channel for the flow of thought that is already generated.

Given, then, the body of a man, it is obvious that for everything which that man brings into existence there must first be a thought in his mind. If he makes a table, he first must have some reason for doing so, there first must be some thought in his mind which urges him to that work. The table does not come first, the thought is first. It is the same if he goes on a journey. That journey is the embodiment, the expression of some thought in that man's mind. The thought came first, the journey second. And so with everything. We can not buy a horse, build a house, speak one word or do one act unless there is a thought in our mind and which lies as the cause of that act or thing or the occasion for it.

"But," it is objected here, "we do a great many things we don't wish to do, never thought to do, disagreeable things. Here is, for example, a man taking a journey on compulsion. He is handcuffed and a sheriff sits beside him. How can it be said that he first was obliged to think of that journey before he could go? He never had a thought of going, yet, there he is."

This is exactly the obstacle over which the telepathist stumbles. It is the same question, in another form, that we instanced in the beginning—the question of the receipt of telepathic messages that never were sent. Here, also, the answer is looked for in the wrong direction, and, proving unfindable, is given up. Telepathy, in the

sense in which it is generally accepted, can not answer the conundrum.

Nevertheless, nothing is simpler than that answer. It is this: It is the criminal's thought, that he would commit the crime, that results in that journey. We do not need to think of the specific thing in order to embody it; or, we do not always need to do that. In fact, we have a thousand wishes that never find expression as we desire, though we never have a single one that does not find expression in some way, even if, owing to our lack of skill in selecting the right means, we often find the result very different from the one we expected. The boy whose thought leads him to the water, thinking to have a good time there, may be drowned; the man who attends a banquet, in the hope of enjoyment, may bring on sickness; the girl who marries riches, in pursuit of power, may find in wedlock impotence and unhappiness; the person who, for the comfort of cooling his heated body, sits in a draught takes cold and arrives at discomfort.

No, it is not the thought of the thing itself, necessarily, that brings it into expression. *Some* thought must lie in our mind behind every result that comes to us.

It is our own thoughts that cause our effects, not externals, not the telepathist, though the externals are the means by which those causes work themselves into material being. A thing, an effect, a body can never be a cause, for, all cause exists on the plane of ideas. Ideas are always causes, *our* ideas; and the effect of them will depend on the intelligence with which we choose our means.

It is absolutely necessary to comprehend this law clearly, or we never shall find the truths and comforts and power that we may enjoy through an understanding of telepathy; so, let us look at it on various sides.

Suppose we wish to change in some degree the configuration of a person's body.

To the uninitiated, it would seem rather a difficult thing to do by thought alone, without a surgeon's knife or some equally material means. And, in fact, it can not be done without material means, though those means may be very much less material than one would think possible, at first or until the nature of the proposed change is shown. That is, we must have material means in order to work a change in the body of another. If the body is our own, that is different. Material means are not always strictly necessary when we are working on our own body, though they are to those who have not learned to do without them.

But, now, suppose that we wish to make another person smile, to change that portion of his body which we call his face from gravity to lightness, so that his whole expression will be different. Please, note that we are not telepathists yet, that we do not claim we can mentally project the thought of smiling into him so strongly as to cause him to act accordingly and smile, as is the claim of the rank-and-file telepathists. We admit that we are obliged to use material means to make him smile.

Now, to alter this man's face, is what I wish to do. Do I go up to him and do it with my hands, stretching it here, pushing it there, kneading it in another place? Do I even tell him, by word of mouth to smile? Not at all. Neither of these methods would accomplish my wish; for, a smile of that kind would only be an apparent, not a real one. And I want a real smile. To that end, I simply tell him something amusing. Then comes the smile all of itself. So that, with only a connection between us as attenuated as words, I have, apparently, altered his body, caused that person to smile, even though I have said nothing to him about smiling. And, on the surface, it seems to be my thought which, by the aid of my words, has wrought that smile.

But, now suppose that I have no desire to make him smile, that I am even unconscious of the man's existence. However, as I walk down the street, my hat blows off, I chase it, make a grab for it, and put my foot through its crown. Does the man smile then? He does, if he saw the episode. Have I caused that smile? Apparently I have. Yet, I was unconscious of doing so, nor had I received any message from him asking me to make him smile at that time; did not even know that such a

man was living. Still, here I am, apparently, working a change in his body.

But, suppose, again, I do wish to make this man smile, and, having told him something amusing find that he does not smile, but, on the contrary, sneers or frowns, he not liking the story or maybe having heard it before. I have used the same means as in the preceding case, but arrive at a reverse result. It certainly is not my thought that causes him to smile this time, for, he doesn't smile. Yet, my thought was exactly the same in both instances. Why is it that in the one case he smiles and in the other he frowns? It is because of his own thoughts—self-evidently. My actions were the means he used, no more. In my second attempt to cause the man to smile, I have failed, though I have done my best. Yet, he smiles when my hat blows off, without any endeavor on my part to make him do so. Moreover, even in the case of the blowing hat, he would not have smiled, providing it were his own hat, and my foot that demolished it.

Consequently, it becomes self-evident that the cause of this man's smile is not my thought, is nothing external to him. The cause is *his own* thought and the externals are the means he uses to express it. Try as I may to cause him to smile, he will not do so unless something in my actions expresses his own thought of humor, and, therefore, I can never cause him to smile at all. It will be, always, his own thought that is the actual cause of his feeling and of the expression of it.

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It scarcely seems necessary to go any further in illustration of Plato's idea that always and in all things thought, intelligence, precedes matter, bodies. It must be self-evident now, so far as humanity—once it is here—is concerned. The body, having arrived at being, procures its effects through its own thoughts, the actions of others forming, together with all those effects, that we call circumstances, the means upon which thought works.

But, where did the body come from, in the first place, and what is it? In short, if Aristotle's theory of the generation of thought is incorrect, in what manner can Plato's theory, which is the reverse of Aristotle's be true?

There seems to be no other logical conclusion than that, as *we* produce things,

bodies, by our thoughts, we ourselves are produced by the thoughts of somebody else or some power outside; or by what we must call "thoughts", for want of a better term.

The ancients used to say, "Man is a thought of God." We can not, at all events, go back of that, or say that it is not so; for, we have no better explanation to offer. And, besides, the conclusion is a sufficient one for our purpose here.

Spread throughout the universe, as Spencer has shown matter to be, this thought of a supreme intelligence becomes compressed at certain points into such a small compass as to become visible in the shape of a sun, an earth, a tree, a man. We learn, through Spencer's theory of evolution, how, in the world of matter, this compression of the invisible into the visible comes about; and he has also shown that the methods of the visible declare those of the invisible.

So, also, we can see for ourselves that in our own affairs our invisible thoughts finally take shape, if persisted in, in the same way that bodies are formed in the universe. A child itself, even as far back as our scientific knowledge reaches, is a concrete expression of a thought, a thought of love in its parents' minds! This love—what is it? We know that it is universal, not only among men, but, throughout the lower orders, that every life-informed body is possessed of it in some degree, yet, we cannot admit that we cause it. Its cause is outside of us. For, even if we should claim that we do cause and make that portion of it which we ourselves possess, we could scarcely claim that we made all of that which informs the world.

There seems to be no other reasonable and logical conclusion than that in the same way in which invisible and universal matter, through the force of attraction and persistence, becomes compressed into visible shape, a concrete reservoir for the storage of the force that caused it, so the universal thought becomes visible in the form of a

man, who then acts as reservoir for the storage of this thought—or we might say a channel for its flow, which was Emerson's favorite figure. We do not, in the last analysis, cause this thought—we receive it. And, we receive according to our individual capacity. As in the material world the smaller the body, the less its force, so it is in the mental world. The smaller the mind, the less is its capacity for thought.

This is the explanation of Plato's theory, that thought makes the body, and not the body thought.

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We now are getting very near the point and mystery of telepathy. It seems plain that, providing thought will heal at all, the person who sent the telegram that was not received until too late, was healed by his own thought, that portion of thought which he possessed, and not by any thought of the healer's. And we, having found that *all* a man's results are caused by his own thoughts, wonder at first where the telepathist comes in in any case. For, if it is a man's own thought that heals him, what is the use of going to a healer? The answer is, simply, because, if one did not go to the healer, he could not have the thought. The thought that he has enlisted a healer—whether he be a physician or a mentalist—in his behalf; and that this healer is exercising his skill for one's benefit, is the seed that flowers into the cure, if he is cured.

Please, notice that we say physician or mentalist. There has been much misunderstanding in this matter, because of a fancied antagonism between medicine and telepathy. But, there is no antagonism, as we have said before. The kind of patient who would invoke the one would not invoke the other; so that neither encroaches on the other's field—if we wish to put the subject on as low terms as those.

When a famous physician said, "We amuse the patient while nature performs the cure," he hit upon the very life of mental healing, and of all healing.¹ For, it is our own thought, as expressed in our nature, that really cures; some of us needing drugs as a means to that cure and some of us not needing them. We summon the physician or the telepathist, according to the amount of intelligence with which we are informed, and the results are correspondent.

It is from a misapprehension of this beautiful truth that some telepathists de-

¹ "Nature," says St. Augustine, "is the will of God." Hippocrates says: "Our natures are the physicians of our diseases." All his teaching and practice center in the aphorism in the sixth book of Epidaurus, "Nature the Healer of Our Diseases." Sir William Gull says: "Disease is not cured by drugs. It is the power of nature that cures disease, and the duty of the medical man is, not to give drugs, but, to assist nature." Galen points out that nature cures disease, and adds: "So do physic and the physician and his instruments, but, nature is the chief efficient cause of health."

clare that a drug has nothing to do with healing anybody. What they mean is, that drugs have no power, in themselves. If a drug should lie on the table instead of in the patient's stomach, it would have nothing to do with his cure. But, if his intelligence is such that he take it into his system, it then becomes a means of the cure, provided it is adapted to his case, and without it he would have died. But, it is his own thought, at bottom, that has cured him, first, by his summoning a physician intelligent enough to prescribe the proper medicine, and, second, by obeying him.

Now, this is the way in which a body is affected by thought:

The thought—the body's own thought—is the cause of its effects, and these will be good or bad according as the subject's intelligence is or is not sufficient to select the proper means. But, means it must have.

There is no such thing as casting your thought into the mind of another without the intervention of material means, such as words or acts. It is only through the senses through the avenues of the eye, ear, nose, mouth and hand that anything in the external world can enter into us. *Thought alone* is superior to the conditions these impose; and every man, as Emerson says, is an inlet and an outlet for it. It flows through us. But, it is the universal thought that moves us, as much of it as we are capable of receiving, and not any persons' thought. Our neighbor's thought produces effects on himself, such as making a physician or telepathist of him, but, it can not affect ourselves. To us, his person is valuable as a means, not a cause, and without him at the proper moment we should suffer and die.

Now let us find what basis there is for supposing that a body can be cured of a disease by thought alone. Then we immediately shall arrive at telepathy and see what it really is.

It is clear that a thought in our mind will produce *some* effect on our body. For, the change of our face from gravity into smiling is self-evidently caused by an amusing thought there, as a frown is by another thought. And, indeed, we know that the thoughts we indulge work themselves out in the shape of our head, the lines in our hand, the firmness of our mouth or its weakness, the glance of our eyes, whether mild or harsh, and in innumerable other ways. If we were sufficiently wise to know just what thoughts would produce each particular appearance and were able to hold that thought persistently, we, doubtless, should build for ourselves some very beautiful bodies. Indeed, we do that now, some of us, by aid of the physical-culturist, the accessories of the toilet, fresh air, change of scenery and seasons, of rest, et cetera, all these things being the means by which our intelligence accomplishes its work. In many different directions, we do know, what thought will produce any given result in our bodies, either with or without material means, as the case may be. As a rule, the greater the change we wish to make, the more drastic, the more material must be our means.

This one thing, however, we do know—both through experience and vicariously—namely, that every pleasant thought we have in mind tends to give a harmonious feeling to the body. And this is the basis of mental healing. To think pleasant thoughts, fill ourselves as full as we can of confidence, hope, cheer, loveliness, beauty, is to find our bodies taking on harmonious conditions.¹ So strong is the power of these thoughts that, if properly persisted in, they will overcome many external inharmonies, on the principle which Plato declares, that mind makes matter.

A harmonious mind produces a harmonious body.

[To be continued.]



Among the Books

KOLMER: "INFECTION AND IMMUNITY"

A Practical Textbook of Infection, Immunity, and Specific Therapy, with Special Reference to Immunologic Technic. By John A. Kolmer, M. D., Dr. P. H. With an Introduction by Allen J. Smith, M. D., Sc. D. With 147 original illustrations, 46 in colors. Second edition, thoroughly revised. Philadelphia: The W. B. Saunders Company. 1917. Price, cloth, \$7.00 net.

With regard to this excellent textbook on infection and immunity, the Reviewer only can repeat what he said in his review of the first edition (1916, p.960), for, frequent reference to it since then has but confirmed him in the good opinion expressed on that occasion. Owing to the constant development of the discoveries and views in bacteriology, immunology, and allied disciplines, it, naturally, is unavoidable that needed changes become manifest from time to time, so that revisions become imperative, and such changes have been made in the present edition of Kolmer's work. Special attention is devoted to the subject of focal infection, which has assumed so great an importance in the minds of students and clinicians within the past few years. The developments in the immunology of, and the immunization against, diphtheria also have been marked and are duly recorded. Lastly, the author's personal work with reference to the complement-fixation test for tuberculosis as also the Wassermann test for syphilis has led to valuable amplification in his treatment of the subject. Altogether, Kolmer's work remains one of the most valuable and meritorious ones in the English language.

DAYTON: "PRACTICE OF MEDICINE"

Practice of Medicine: A Manual for Students and Practitioners. By Hughes Dayton, M. D. Third, Revised, Edition. Philadelphia: Lee & Febiger. 1917. Price \$1.50.

This little epitome of practice is, as it was intended to be, suitable for rapid refer-

ence, mainly for diagnosis. Unfortunately, at least in our opinion, the treatment suggested for many diseases is less satisfying. While the management of infectious diseases, especially of diseases such as, for instance, typhoid fever and tuberculosis, is largely hygienic and dietetic, so much can be accomplished by the administration of certain antiseptics that the omission of mention of these remedies seems unfortunate. The Reviewer has in mind numerous journal articles in which the great benefit of intestinal antiseptics in the treatment of typhoid fever is clearly shown. In other diseases, notably smallpox, calcium sulphide has gained a position recognized by many experienced physicians as being capable of limiting the severity of the disease and promoting its favorable course.

The Reviewer has no desire to deny the importance of diagnosis, but, he is most likely to look up reference-books for the purpose of refreshing his mind in relation to treatment, and it is to be hoped that the matter of therapeutics, definite, courageous, and hopeful, will receive greater attention in future publications, not only in future editions of this excellent little epitome, but, also in other works.

NORRIS: "BLOOD PRESSURE"

Blood Pressure: Its Clinical Applications. By George William Norris, A. B., M. D. Third edition, thoroughly revised. Illustrated with 110 engravings and 1 colored plate. Philadelphia: Lea & Febiger. 1917. Price \$3.50.

The second edition of this excellent work on blood pressure was reviewed only last May. It is a splendid testimonial of its value that a new edition has become necessary so soon. The clinical importance of blood pressure readings and the practical information conveyed by them to the observing physician no longer is a matter of doubt, and it is incumbent upon every practitioner to study this subject with care. We know of no book that is superior to this

treatise by Norris, and mighty few that are equal to it.

MEDICAL WAR MANUALS

Of the Medical War Manuals authorized by the Secretary of War and published under the supervision of the Surgeon-General and the Council of National Defense, by Lea & Febiger, Philadelphia and New York, we have received the following:

Military Ophthalmic Surgery. By Allen Greenwood, M. D., Major, M. R. C. Including a chapter on trachoma and other contagious conjunctival diseases, by G. E. de Schweinitz, M. D., Major, M. R. C.; also a chapter on ocular malingering, by Walter R. Parker, M. D., Major, M. R. C. Illustrated. Price \$1.50. This is "Medical War Manual No. 3."

Military Orthopedic Surgery. Prepared by The Orthopedic Council. Illustrated. Price \$1.50. This is "Medical War Manual No. 4."

The last-mentioned booklet devotes three chapters to the consideration of the soldier's feet, and to the proper selection of shoes, and to the care of socks. This topic of the pedal extremities is receiving—at last!—greater attention on the part of civilian physicians, who well may learn from the discussion in the present volume.

LEWIS AND DE ROULET: "GYNECOLOGY"

Handbook of Gynecology for Students and Practitioners. By Henry Foster Lewis, A. B., M. D., and Alfred De Roulet, M. S., M. D. With 177 illustrations. St. Louis: The C. V. Mosby Company. 1917. Price \$4.00.

The authors are conscious of the just reproach that is often made, that teachers or writers on medical subjects do not realize the relative importance of their specialties to the rest of medical knowledge. They have tried to appreciate that gynecology is a less subject than medicine, surgery or obstetrics, and have endeavored to prepare a book that will recognize, in its demands upon the time and energies of the student and reader, the proper rank of the specialty.

The text of this book impresses us as being well planned and thought out and excellently arranged. It presents a guide for the gynecologic operator. For all that,

in the opinion of the authors, the actual textbook can not teach details of technic, any more than this can be done in the lecture-hall. They believe, in fact, that it is the hospital that is the place to learn surgery, while lectures and textbooks can only supply the knowledge of principles and can not, with profit, go too minutely into detail.

LITERATURE ON THE PREVENTION OF BLINDNESS

Physicians who are interested in the prevention of blindness should get in touch with the National Committee for the Prevention of Blindness, 130 E. 22nd Street, New York City, which has been instrumental in publishing a large amount of literature relating to its work.

As is well known, an enormous amount of work is being accomplished, particularly with reference to trachoma, not only at the quarantine stations, where intending immigrants are carefully examined, in order to exclude from the country persons afflicted with this disease, but, also, in the mountain districts of Tennessee and other states where devoted medical men and women do great good in searching out victims of this affection and treating them.

The Committee for the Prevention of Blindness publishes, five times a year, its organ, *The News Letter*, copies of which will be sent gratis to anyone making request.

SHATTUCK: "MEDICAL TREAT- MENT"

Principles of Medical Treatment. By George Cheever Shattuck, M. D. Third edition, revised and enlarged. Boston: W. M. Leonard. 1916. Price \$1.50.

Here is a little book, small enough to slip into the coat-pocket, that attempts to outline, clearly and concisely, some principle of treatment based on known pathology; the methods described being selected from those that have been tried at the Massachusetts General Hospital or in private practice. The diseases the treatment of which is described are: cardiac insufficiency, including valvular disease; circulatory disorders in the infectious diseases; angina pectoris; syphilitic angina; degenerative angina; nephritis; acute infectious diseases; acute infections most common in

childhood; pulmonary infections, including pulmonary tuberculosis; acute inflammation of the upper respiratory tract; gastric and duodenal ulcer. The discussions of treatment advised for these maladies is followed by a synopsis of drugs detailing the essential points that should be known about them, the indications for their use, and other relevant points. While the materia medica recommended is almost entirely galenic, there is much to be recommended in the principles of treatment outlined.

"PRACTICAL MEDICINE SERIES"

The Reviewer acknowledges, of the 1917 series, receipt of the following: volume 6, General Medicine, edited by Dr. Frank Billings; volume 7, Obstetrics, edited by Dr. Joseph B. DeLee; volume 8, Therapeutics, edited by Dr. Bernard Fantus, and Preventive Medicine, edited by Dr. Wm. A. Evans.

The Practical Medicine Series is published, in 8 annual volumes, by The Year Book Publishers, of Chicago, at an annual subscription price of \$10. However, the individual volumes may be purchased separately, and these represent one of the most convenient means by which the practitioner can keep himself informed in the progress made in medicine and surgery.

MONTGOMERY: "CARE OF GYNECOLOGIC PATIENTS"

Care of Patients Undergoing Gynecologic and Abdominal Procedures Before, During, and After Operation. By E. E. Montgomery, M. D. Illustrated. Philadelphia: The W. B. Saunders Company. 1916. Price \$1.25.

This little book is dedicated to the many loyal and devoted women whose faithful service has made good surgery possible. It grew out of a set of instructions prepared by the author for his assistants.

There are a few books on the market on the after-care of patients during recovery from operation; but, this little volume includes the care necessary for the preparation of the female patient preliminary to the operation, and also for her care at the time of the operation. It, naturally, will be of service mainly to the interne and the nurse. Yet, surgeons in small hospitals and general practitioners, especially those in country practice who include

surgery among their many duties, will find it of great assistance in preparing and caring for their gynecologic patients.

BOWERS: "BATHING FOR HEALTH"

Bathing for Health: A simple Way to Physical Fitness. By Edwin F. Bowers, M. D., New York. Edward J. Clode. 1917. Price \$1.00.

This book by Doctor Bowers is written for the benefit of those who want to be clean and to keep so. It is not a scientific treatise, although much scientific information is contained in it. Rather, it is a chatty, bright, and entertaining series of talks on the subject, in a style and after a method characteristic of the author. While you may safely recommend this little volume to your patients, doctor, you will make no mistake in reading it yourself. Better do so. We did, and we liked it and got lots of good from it.

LOCKE: "HAMILTON WHEELER"

The Conversion of Hamilton Wheeler: A Novelette of Religion and Love, Introducing Studies in Religious Psychology and Pathology. By Prescott Locke. Bloomington, Illinois: The Pandect Publishing Company. 1917. Price \$1.25.

We hesitate to take up the consideration of this book. Religion is so essentially a personal matter that anything like attempting to make the views and opinions of any one of us a standard to which we expect others to conform is repugnant to the sense of freedom that animates the American. Nevertheless, there are some things that are accepted as right by everybody, and some sentiments in which all rational people must agree.

In this book, the author makes a powerful attack upon emotional upheavals such as those of Billy Sunday; indeed, looks upon such outbursts as calculated to disturb the reason and control of the mind over the lower instincts, opening the way to sensuality and weakening the intellect in its efforts to grasp the meaning of the deeper problems presented to the maturing youth. Departing from the realm of reason, the hero of the story is swept away by a flood of thoughts and feelings outside its bounds; he is frantically urged to let reason alone, to look upon its warnings as the work of

the devil, to let loose every form of mooring and allow himself to be carried, unheeding and without knowing whither, into a wild, swirling chaos, where supernatural guidance is vouchsafed him.

The floodgates of self-control broken down, the emotional state substituted for the former calm reason leads the victim to acts previously impossible to him. The boy of eighteen and the girl of seventeen, total strangers to each other, are swept by the hysteric wave to the mourners' bench, and then, the meeting ended, go together to the girl's home, where the emotional commotion all too often finds expression in the sexual embrace—a thing that was absolutely foreign to their thoughts. Carried down to the verge of insanity, the boy may be rescued, in the nick of time, by some wise relative, being restored to his normal state by a course of mental and sanitary treatment.

Just such a story is presented by the author, to illustrate his position; but, it must be said, it is of the crudest, evidently being concocted as a string on which to thread the argument. There is no character analysis, nor any attempt at differentiation between the characters.

To a real woman, the doctor's ponderous discourses would have proved irresistibly hypnotic. Even so, the book would have been unreadable for the vast majority, had it been left, without the flimsy excuse of the story it contains. Much of it will be skipped by the well-informed, because the matter presented is familiar, and not read by the masses, because most people are not interested in it or are incapable of comprehending it.

We may, perhaps, argue that, to attribute the sexual débacle to the emotional state induced by the revival meeting, is not wholly justifiable, for, there is enough tinder in the boy of 18 and the girl of 17 to render such a heterologous spark unnecessary. Yet, popular repute saddles such rousing of the animal instincts upon these quasi-religious upheavals and the scoffers declare that any campmeeting is more than likely to be followed in due

time by a crop of surreptitiously begotten infants. True or not, the fact of the assertion is significant.*

There are those to whom the religious sentiment is not based upon emotion, but reason; who believe that the truth is so firmly fixed that every resource of scholarship, of investigation, of critical examination may be safely brought to bear upon its tenets; that it is fully capable of withstanding every test in the power of man; and that the more searching these may be, the better will these eternal truths be established. There are also those to whom religion is a matter for reverential approach, to whom the sanctuary is, indeed, sacred, and the Deity a Being of such infinite grandeur as to command the profoundest respect from the mightiest human intellect. To these, the antics of the mountebank, as described in this book, are more loathsome than is the most unbridled blasphemy.

A man may be a freethinker and, yet, reverent; an agnostic and, yet, cognizant of the awful majesty of the possible God. He may be honestly unable to say that he sees aught but humanity in Jesus, and, yet, recognize the immortal verities in his teachings, the divine beauty of his doctrine of universal love.

But, we are not all alike. Man is constructed on a certain pattern, nevertheless, the variations in detail are infinite. It may well be that to some the vulgarity, the irreverent familiarity in the Sunday manner of addressing himself to the Throne of grace appeals; and, if that awakens but one sinner to repentance, induces but one wrongdoer to mend his ways and try for right and clean living, why, in God's name, let him go ahead with his work. No pleader for freedom of the human mind can ask that other men shall yield their minds to his control or their beliefs to his own standards. Just now the world is fighting for the establishment of this individual freedom.

Prescott Locke's book will accomplish very little. For those who need it, it is over their heads. Diluted and sugared by a Corelli, it might pervade the minds of a multitude, who thereby would be enormously benefited.

W. F. W.

*Those who would like to read more on this socially highly important subject, will find a study of Weir's "Religion and Lust" interesting and informing, although not exactly orthodox.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6361.—“Sebaceous Cyst.” H. S. B., Pennsylvania, presents the case of a man about sixty years old who has on the gluteal muscle a mass about one-half as large as a goodsized orange. At first it was hard, now, though, is soft and feels as if there were a liquid in it. There is no inflammation about the tumor, but, the man can not bear sitting on it, and it stings and burns somewhat at times, he says. Several doctors have examined the growth, and one said it was cancerous, while another said it was harmless and it should be let alone. Our correspondent believes it to be a cyst and wishes to know whether there would be any danger in inserting a needle to find out the nature of the contents, and, if it be a fluid, to draw it out and inject a little solution of iodine into the cavity.

We cannot express a positive opinion, but, are inclined to believe that your patient presents a simple sebaceous cyst (atheroma), even though it is unusual to find such growths about the glutei. The location would, of course, render it necessary to think of the possibility of a rectal fistula draining into that locality. Still, the fact that there is no inflammation about the tumor and that it was originally hard and later became soft evidences very distinctly the desirability of evacuating the contents. Were we in your place, we believe that we should unhesitatingly incise.

On the other hand, if for any reason a small incision (which can readily be enlarged as soon as you are sure of your ground) would seem inadvisable, there is no reason why you should not aspirate. We doubt, though, the advisability of sub-

sequently injecting tincture of iodine or other irritant.

If there is revealed a collection of purulent material, free incision, thorough cleansing of the cavity, and careful dressing (with slight pressure) probably will effect a cure; if, however, you have to do with a cyst, its wall should be broken up, or, better still, removed in its entirety.

If for any reason after more thorough examination you are at all in doubt as to what to do, aspirate a small portion of the contents and forward to a pathologist, for examination. At the same time, give clear clinical data, especially as regards the condition of the rectum and the general health.

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QUERY 6362.—“Uterine Fibroids, Cancer of Stomach.” B. E. E., Kansas, requests information regarding fibroid uterus, the “latest ideas” as to treating cancer of stomach, and other forms of cancer.

The treatment of both these conditions is distinctly surgical. In some instances, fibromata have decreased in size under the administration of chromium sulphate and calcium iodide, however, it must be borne in mind that not infrequently fibroids have ceased to grow altogether or at least remained quiescent for an indefinite period; also, tumors of considerable size have disappeared after childbirth, seeming to undergo involution along with that of the womb. So, also, the tumor may undergo senile changes and atrophy along with the uterus after the menopause. When after a long period of quiescence the fibroid begins to grow rapidly, it is usually due to pregnancy or cystic degeneration.

While in the vast majority of cases an operation is called for, occasionally the in-

dications are in favor of palliative treatment. Much depends, of course, upon the size and situation of the tumor, the mobility of the uterus, and the absence of pressure-symptoms or of serious hemorrhage. For instance, a small tumor not in the lower uterine segment, with the uterus freely movable and the surrounding parts not subjected to pressure, does not demand immediate operative removal, especially if the woman is nearing the menopause or if she is young and desires children.

Of course, we are sometimes forced to tentative measures, because patients refuse to submit to surgical relief; subsequent dangers should, however, always be explained to such patients.

Hemorrhage, pain, and the results of pressure are the symptoms demanding attention. During hemorrhage, the patient should always be confined to her bed; hot vaginal douches (of at least 120° F.) should be given twice a day.

Very severe hemorrhages may be controlled, sometimes for a month at a time, by the means of properly applied tampons, preferably consisting of a strip of gauze 4 to 6 inches wide and sufficiently long thoroughly to pack the vagina. Such tampons should be renewed every twenty-four hours. In some cases, the upper end of the tampon may suitably be saturated with a 25 percent solution of ichthyol in glycerin.

Strychnine and ergotin are the most useful drugs to control hemorrhage, but, should be employed with extreme care. Sometimes hydrastine, in alternation with a good preparation of cannabis indica will give better results than ergot in any form. Where pain is prominent, ergot is extremely desirable. Laxative salines are essential, for keeping the bowels clean.

As for the results of pressure upon the rectum, bladder, ureters, et cetera, little can be done beyond having the patient assume the knee-chest position for fifteen minutes, three times a day. The use of tampons and supporters usually is ineffective.

In many instances, the anemia and renal complications that exist render it imperative, not only that a thorough general examination be made, but, that the patient be placed upon reconstructant tonics before subjecting her to any operation. Therefore, the blood and urine should always be

examined and the condition of the heart definitely ascertained.

The surgical treatment of uterine fibroma is thoroughly covered in Ashton's or similar modern work on gynecology.

In cancer of the stomach, internal treatment is of little or no avail at any stage, though conduragin and large doses of nuclein seem to have proven temporarily beneficial in some cases. The first-named drug, however, acts chiefly by allaying the pain of gastric carcinoma.

Simple (skin) epithelioma has frequently yielded to the application of Marsden's paste and the subsequent application of thuja. After the eschar has been removed, pinpoint grafts may be scattered over the denuded area and nourished with "applied blood." Arsenous sulphide or iodide, the arsenates of iron, strychnine, and quinine, with nuclein; irisin, rumicin, xanthoxylin are the most useful tonic-alteratives. Free elimination always is essential, while nutrition should be improved. Always, the earlier surgical procedures is instituted, the better the patient's chance for recovery.

In ulcerative cases, good results are obtained from sprinkling the sore thickly, once or twice daily, with finely powdered galactenzyme, covered with a light dressing.

No preventive or even curative bacterin or serum has as yet been discovered for cancer, but, secondary infections can usually be prevented or, if present, not infrequently cured by administering combined-bacterin (Van Cott).

QUERY 6363.—"Metatarsalgia." W. M. B., Idaho, is treating a case of metatarsalgia, fourth toe, left foot, not caused by flat-foot. It is exceedingly painful, even distressing the patient after riding in the saddle. Arch-supports aggravate the condition, if anything.

Treatment for metatarsalgia (Morton's disease) at best is unsatisfactory, especially when no static deformity of the foot exists, as in this instance.

In some cases, the foot is entirely normal; in others, the arch may be slightly lowered; then, also, a hollow may be found on the dorsum of the forefoot over the heads of the middle metatarsals; occasionally the dorsal flexion of the foot is limited.

It sometimes is necessary to stretch the gastrocnemius muscle. Always boots of

proper width must be worn, and thus compression of the front of the foot avoided. The flexibility of the toes should be increased by exercises in which the toes are bent downward.

The pain experienced arises from the pinching of the plantar nerves between the heads of the metatarsal bones, while, unfortunately, there is a tendency toward an increase in frequency and severity of the attacks.

Unless the anterior arch of the foot is depressed, the wearing of domes, fitted in a leather sole and placed behind the heads of the metatarsals, will not prove beneficial.

The removal of the distal end of one of the metatarsals has, as you may know, been warmly advocated, but, has, many times, been followed by a relapse.

Proper exercising of the foot and the wearing of a correctly fitting shoe alone seem worthy of consideration.

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 QUERY 6364.—“Wanted! An unusual Remedy for a Common Condition of Mind.” P. J. M., Illinois, asks help in the case of a woman, age about 64, living practically alone, whose son in St. Louis is very anxious for her to go and live with him. “To make a long story short, she is somewhat deranged in her upper story, yet not enough so to be committed to an institution. Now, what the son is figuring on is, to give her something that will make her willing to go, but, will not affect her mental condition. If,” says P. J. M., “you will send me enough of such remedy to keep her under the influence for, say, two or three days, you will be doing me a great favor.”

To be frank, we greatly regret that, though having spent the greater part of our adult life in the study of therapeutics and pharmacology, we are unfamiliar with any substance that is capable of effecting results such as here are postulated. It would be possible, of course, to put that old lady under the influence of an opiate, bundle her up in some blankets and carry her off. The ancients, as you are aware, used to think that hellebore administered to individuals mentally unsound would put them in a favorable state of mind to receive desired suggestion.

The famous “love-potions” that have been sold in remote country districts for, lo! these many years are said to cause hardhearted damsels to overcome personal

scruples and parental opposition and to flee hastily to the arms of the waiting swain. Only, the trick has been, to get the fair maiden to swallow the potion.

Then, as you are aware, certain old ladies in remote regions had a charm or “come-along,” which was supposed to exert an influence upon the fair one, if hung over the front door of her residence when the moon was in the first quarter. These old women, however, never were able to sell adjuvant charms that would prevent father or big Brother Bill from coming out and booting the charmhanger from the threshold. So, it was never very popular.

Under the circumstances, we only can suggest that the son go to his mother with a railroad-ticket in his hand and the promise of a real comfortable home with him, and to ask her to try it for a month or two, assuring her that at the end of that period, if she be not perfectly happy, she may return to her former domicile.

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 QUERY 6365.—“Powdered Tin in Furunculosis.” F. J. K., Nebraska, asks: “What about tin powder or powdered tin for boils? I recently saw an article recommending it.”

This writer has had no personal experience with the use of tin in the treatment of boils. Some time ago, we saw an article on this subject, but, forget just what form of tin there was recommended.

Tin, or stannic oxide (flowers of tin) is, medicinally, obsolete, and is employed only as a polish for the finger-nails, glass, steel, alabaster, and other hard substances.

Pure powdered metallic tin has been given as a teniafuge in doses of 8 grains four times a day. As purified tin is not considered poisonous, 2 grains might safely be given three or four times daily for some days. It should not be administered when it becomes oxidized nor when it contains other metals, notably lead.

Bisulphide of tin (stanni bisulphidum) also has been given to remove tapeworm, 10 to 20 grains being mixed with honey and administered two or three times a day.

Chloride of tin (stanni bichloridum) likewise has been prescribed and is said, by some writers, to act as an antispasmodic in epilepsy, chorea, and similar spasmodic diseases. Internally, the dose of the bichloride is from 1-16 to 1-2 grain, two or three times daily, in the form of pills. Toxic

doses cause spasmodic movements of the muscles of the extremities and of the face, and sometimes paralysis.

As we have in calcium sulphide such a positive and innocuous remedy for furunculosis, acne, et cetera, we should hesitate a long time before administering stannum in any form.

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 QUERY 6366.—“Multiple Neuritis.” C. L. B., Indiana, asks suggestions in a case of multiple neuritis in a girl sixteen years of age, but, otherwise, apparently, in good health. “The pain,” we are told, “first appeared in her left thumb, in July, and during several months did not extend beyond the arm, but, now it affects both of her arms and hands. Her blood, kidneys, chest, heart, and lungs are normal, so are her menses. She does look slightly anemic. (The last blood examination was made three weeks ago.) Her tonsils, teeth, and gums also are all right. However, she has a slightly enlarged thyroid gland and is very nervous. There is no fever now, but, early in her sickness, she had a temperature of from 99° to 100° F. The pain is severe, and for this she has had bromides, chloral, and phenacetin (no opium).”

It is unnecessary, we are sure, to point out the difficulty of prescribing for a case of multiple neuritis in a girl of sixteen, without a previous very thorough study of the patient's present condition and past history. As we understand it, the pain first appeared in the left thumb and then affected the arm, but, you do not tell to what extent the arm was involved during the first three months, that is, before both of her hands and arms became affected.

Unquestionably, the chief causes of multiple neuritis are the various infectious fevers—diphtheria, scarlet-fever, measles, mumps, typhoid, and the like; also, the influence of malaria must not be forgotten. In this case, metallic poisons and alcohol undoubtedly can be excluded, so that there remains to be considered the possibility of the so-called rheumatic neuritis, which may follow simple exposure to cold.

In neuritic affections of the upper extremities, the existence of cervical ribs has recently been regarded as an important etiologic factor; however, as this condition is always congenital, some auxilliary factor must be held responsible for the later

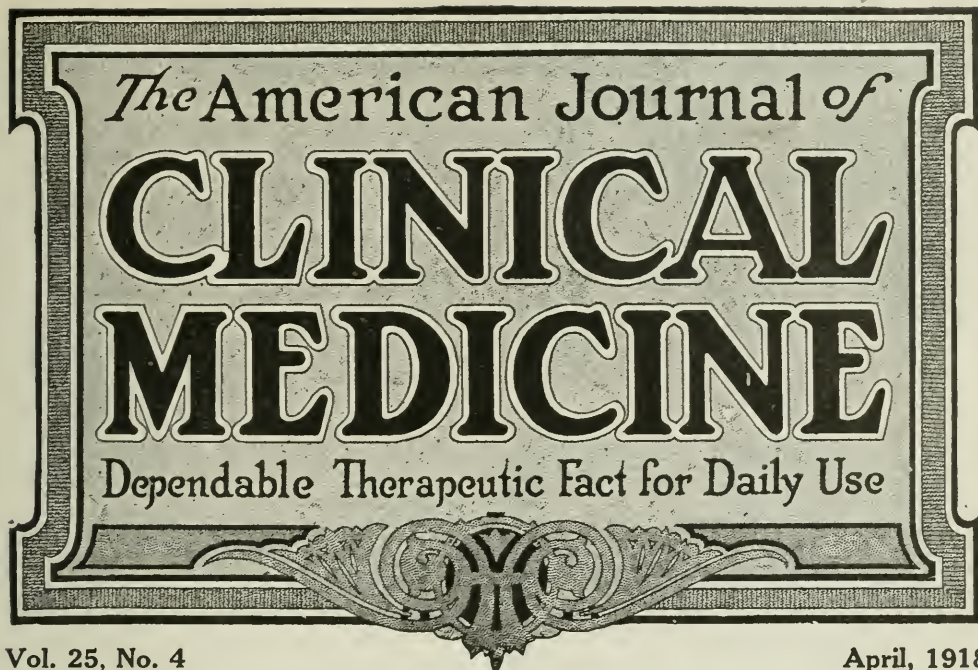
appearance of the neuritic phenomena, such as overexertion, infection, trauma.

Where a neuritic paralysis exists and radiograms disclose the presence of cervical ribs, the removal of the latter may be indicated. As a rule, the operation, though technically difficult, results in benefit. It must be borne in mind, though, that, even if the x-rays reveal cervical ribs, some caution should be observed in referring to these any nervous irritative symptoms or the absence of functioning in the upper extremities, inasmuch as their existence merely is a sign of degeneration and may go hand in hand with many general diseases of the nervous system.

In this particular case, you do not state whether or not paralysis or even general weakness of the muscles of the arms is present. As a rule there is more or less wristdrop, the muscles of the hands are shrunk and the surface temperature is below normal. Early in the attack, there is more or less hyperesthesia, followed by partial anesthesia, and the sensations of touch, pain, temperature, and the muscular sense are equally affected. The pain complained of is sharp and neuralgic in character, and invariably associated with acute tenderness of the nerve-trunks and the muscles supplied by it. The electrical reactions are altered—every grade of reduction in the responses being seen, from a slight diminution in the reaction to faradism to the complete reaction of degeneration. The sensory symptoms always disappear before the motor symptoms.

During the acute stage, heat (preferably hot epsom-salt compresses) may be applied to great advantage, together with counter-irritants. We believe you will find some such preparation as the following very useful: guaiacol, grs. 40; methyl salicylate, grs. 40; menthol, grs. 3; lanolin and petrolatum in equal parts, enough to make oz. 1. This to be inuncted two or three times a day. Sodium cacodylate may be given from the first; also, iron, quinine, and strychnine are distinctly indicated.

In every case, thorough elimination—renal, dermal, and intestinal—should be maintained. Very many patients are markedly benefited by the prolonged use of combined sulphocarbolates. Excellent results may be expected from the use of the galvanic current.



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The Rational Treatment of Typhoid Fever

IF we stopped to say, "I told you so," every time a confirmation of our therapeutic principles appeared in print, we really think we should have to cut out all the rest of the reading matter and increase the number of our pages, in order to get in all those references. We are referring just now to the article on "copper arsenite in typhoid fever" printed on page 142 of our February number. This paper was condensed from one by Dr. L. F. Solomon, as published in *The New Orleans Medical and Surgical Journal* for December last. We wonder what the people who so strenuously deny the value of intestinal antisepsis would have to say of Doctor Solomon's list of 186 cases of typhoid fever without a single death, and without tympanites, hemorrhage or any other affliction.

At about or shortly after the time when we began to advocate the sulphocarbolates as intestinal antiseptics, Dr. John Aulde, of Philadelphia, began to recommend copper arsenite for the same purpose. Each of these agents has many friends, and that both have succeeded as they have, certainly indicates that success following their use

depends upon the principle of antisepsis rather than upon any one member of the group of antiseptic remedies.

It is a pity that medical opinion is so largely ruled by fashion. Instead of medicine being the freest and most scientific profession practiced by humanity, it is about the most stubborn and pigheaded when it comes to receiving and utilizing new knowledge.

In one point, we have to differ with Doctor Solomon, namely, when he suggests that excessive temperature rises should be met with sponging with diluted alcohol and by applying an ice-cap to the head. This is, to direct treatment to the effect, and not to the cause. Such febrile rises may be attributed to imperfect emptying of the bowel and to the contact of retained and decomposing fecal matter with the open intestinal ulcers. The indication is, to try to get rid of this foul material and have these ulcers bathed in a somewhat less toxic fluid.

However, there is something in the action of the salts of copper that deserves much closer study than they have yet re-

ceived. Copper is practically nontoxic to the human being; while of all the metals it is doubtful whether any excepting mercury exerts so powerful a restraining influence on certain microorganisms. The sulphocarbolate of copper is something, therefore, that should not be passed by without trial.

If the gatherer gathers too much, Nature takes out of the man what she puts into his chest; swells the estate, but kills the owner. Nature hates monopolies and exceptions.

—Emerson.

IRON IN ANEMIA

One of our able contemporaries is opposed to the practice of giving iron preparations in anemia, for the reason that iron in abundance is normally obtained from the food.

Of course, iron is normally obtained from our food, and we only have to restore the digestive organs to a healthy condition to supply the system with iron in the natural process of assimilation. But, it often is impossible to restore digestive organs to health while the blood is lacking in red blood-corpuscles and while the digestive juices are unable to break up complex food-molecules and transform their nutritive constituents into matter readily assimilable. Why do we give egg-water to an irritable stomach instead of baked beans? Why do we prescribe predigested and highly concentrated foods in pernicious anemia instead of giving pie and cheese? Why, indeed, have we a science of dietetics at all? Healthy digestive organs obtain nourishment from almost any food. But, clinically, we have found that when the functional activity of the digestive organs is impaired we get better results by prescribing a diet that nourishes without overtaxing enfeebled powers.

So it is in anemia, by giving iron in a readily assimilated form, we supply the lack in the system, and the digestive organs soon respond to the influence of enriched blood by improving in tone and power. No doctor who has witnessed the almost immediate effect of iron preparations in the terrible anemia of diphtheria, scarlet-fever, et cetera, can doubt its beneficial influence. Theory is admirable when it is borne out by facts; but, we must be governed by facts alone. The digestive organs should, and normally do, supply the system with all

its needs. Still, the digestive organs are not infallible. They are very sympathetic and respond quickly to trouble in remote parts of the body. For instance, the anemia of pregnancy, before the system becomes habituated to the new drain on it, is largely responsible for the distressing nausea and vomiting. Small doses of iron will often benefit, if not entirely relieve, the gastric symptoms.

The great fundamental law of action and reaction must never be overlooked. As has been well said, "disease can be cured only by the removal of its cause," and if anemia, due to lack of hemoglobin in the blood, be the underlying cause of digestive inadequacy, let us try to remove it by the administration of iron in a readily assimilable form.

AS TO INOPERABLE CANCER

The list of incurable diseases is contracting. Thus, instead of looking upon tuberculosis as a member of this class, we now know that very many cases, probably a very large majority of all cases, recover. We have learned, also, that in a case of organic disease of the heart, liver, kidneys or other organs, when there has been destruction of tissue which we can not hope to re-create, we, still, can do wonders in the way of enabling the patient to continue to live, despite his disability. In truth, many such victims not only endure till the full expectancy of their lives has been fulfilled, but, even longer than they would have had they not been compelled through their condition to care for themselves and conserve their remaining stock of vitality. Not only so, but, their lives may be as well lived, as well filled with usefulness and happiness as of those of men suffering no physical disability.

When we come to cancer, it is different, and there is all the more reason why we should concentrate our energies upon this intractable malady. The surgeon has one remedy—cut it out. But, he is pushing his intervention constantly toward an earlier stage of the disease, until in many instances it is not cancer he is operating upon, but, the dread of cancer or of the possibility of cancer in the future. When once the disease has developed to the point of a positive diagnosis, he will admit that the prospects are not so great. Nevertheless, even

here he finds a useful field, in checking the progress of the malady and relieving the patient from much of his suffering. The elder Gross operated upon a woman for mammary cancer twenty-seven times during the period of about as many years.

However, we come face to face with cases where operation is not to be considered, such, for instance, as abdominal cancer, although intraperitoneal and multiple several times, at that. In the presence of such a condition, the boldest surgeon folds his tent and his paraphernalia and sorrowingly goes home.

Twenty years ago, in the presence of such a condition, we were confronted with this question:—"If life be impossible unless the patient is drugged into unconsciousness, why live? Sleep is but the little brother of death; and, surely, with a sleep from which the patient arouses only to suffer the torture of hell until he or she is put to sleep again, why sleep?"

This state of affairs, however, has changed and in such desperate circumstances there is now some chance for the unfortunate one. We refer particularly to the treatment by means of the x-ray and radium in the hands of an expert. There is nothing miraculous about these remedies nor are they exceptions to the universal rule, that a remedy is effectual in proportion to the skill and experience of the operator. But, when that is understood, there is, really, more to be looked for from this method of treatment than we should have believed possible a few years ago.

We mean exactly what we are saying: it is not the camouflage with which the dying patient is so universally deceived by his kind-hearted physician. For our own part, we never did believe much in lying and used that remedy (the lie), only when in our judgment it was indicated—as a matter of duty, as being the most effective therapeutic weapon at our hands. However, when day after day we see the cancerous tumors shrinking in size and the other symptoms concomitantly improve, we feel fully warranted in saying that the x-ray and radium offer such chances to the inoperable-carcinoma patient that he is not justified in neglecting them.

Now, don't holler "enough," until you are licked. Comes to mind the tale of the Cumberland sloop. With old-fashioned

smooth-bore guns, she saw her shot and shell rebounding harmless from the sloping walls of the iron-clad Merrimac, while shells from the latter penetrated the wooden sides of the Cumberland as a needle goes through cloth. Then the Merrimac rammed her, once, twice, tearing, each time, a huge hole in her side, through which poured in the flood of salt waters of the bay. The Cumberland sank until she rested upon the bottom; yet, even so, her flag, flying from her lofty mast, still waved over her watery grave. That's the stuff, my cancerous friend.

It is not for man to rest in absolute contentment. He is born to hopes and aspirations, as the sparks fly upwards, unless he has brutified his nature, and quenched the spirit of immortality, which is his portion.

—Southey.

WE HAVE LEARNED SOMETHING NEW

We always like to see a man who isn't afraid to acknowledge that he is wrong. Sometimes we—the writer of these lines—are wrong, ourselves, and it would be very hard, indeed, for us to acknowledge it, in anything excepting in therapeutic lines. But, here, we are so much more interested in the therapeutics itself than in the establishment of our own private individual views that it comes easy.

Of all the agents in the materia medica, it is probable there is not one that is so thoroughly and universally known as to its therapeutics, in the profession and outside of it, as "epsom salt." Why, it is as familiar to all of us as table-salt. But, the researches of the last few years have shown that magnesium sulphate possesses properties never so much as dreamed of or suspected by the thousands of practitioners who have used this agent since the Roman legionaries camped about the Epsom spring in old Albion.

We are just enjoying a little laugh at ourselves. How confidently we asserted that we had the active principle of the Epsom water in the sulphate of magnesium, and nobody but a mossback would persist in using the water when he could get the clean, chemically pure salt and administer it in accurate dosage. "Yes, but," remonstrated the alleged mossback, "there is something else in this water besides magnesium

sulphate." "Very good," we rejoined, "trot it out. For what do we maintain chemists and study chemistry? Let the gentry of flask and crucible get busy. Extract this 'something else' you talk about and let us have it in tangible shape, where we can see it, taste it, try it out experimentally and apply it in practice; suitably dosed and rationally administered for such ailments as we may find it useful."

Our position was that of the materialist generally. But, lo and behold, along comes radium and knocks our argument into everlasting smithereens. More than that, we find the most amazing possibilities, in the way of therapeutic applications, depending upon elements in the natural mineral waters the properties and powers of which have now been established beyond a peradventure. Half a century ago, we should as well have given credence to the fantastic imaginings of the Thousand Nights and a Night.

After all, is there any position a reasonable man can take, save that of an agnostic? How can we deny anything after the x-ray and radium? How can we sneer at the fantastic claims for curative properties in mineral springs, mud baths, and like cures, which we have hastily set down as mere excuses for wheedling money from the pockets of easy victims? It is true, when a claim is made for radioactivity of any mineral water, we only are in position to question the truth of the presence of this element. But, what will be the next similar discovery?

A steady hand in military affairs is more requisite than in peace, because an error committed in war may prove irremediable.

—Bacon.

MAGNESIUM SULPHATE CURATIVE IN CANCER?

Quite recently, we were surprised when a thoroughly capable physician, one of the kind whose views are always worth heeding, asserted that there was something in Doctor Burgess' claim that lotions of magnesium sulphate restrained the development of cancer, and even caused its retrogression to the point of cure. Doctor Burgess accomplished much good by directing attention to the topical application of this remedy. His claim to cure cancer, however, did not seem, to this writer, to merit much

consideration. Because of his not being a scientifically educated physician or a college man, we doubted Doctor Burgess' ability to distinguish between malignant and other growths. Nevertheless, we can not afford to take chances, and, when it comes to treating cancer, we ought not to lose any bets.

We wonder whether any readers of CLINICAL MEDICINE have had experience in this matter. If so, won't you, please, sit down just now, while the subject is in your mind, and write out your experience and send it to the editor? Understand, failures are just as important as are successes. What we want now, and always, is not, to establish the value of a remedy by the views of somebody else, but, to establish the truth.

When we have found that any remedial agent has value in any direction, we immediately set about endeavoring to delimit its field of activity. It is exactly like developing an oil-field. When a new oil-pool has been struck, people begin to put down their wells all around it, and they keep on doing this until they have established the limits of that field of production. That is exactly what we should do with our remedies.

Doctor Burgess has gone to his final reward, but, it certainly would justify the erection of a monument to him, were this one claim of his to be established.

IODINE IN ORGANIC HEART DISEASE

Our diagnoses of organic diseases of the heart depend upon the presence of abnormal murmurs modifying the heart-sounds. These murmurs are attributed to alterations of the valves by abnormal deposits, which result either in narrowing the lumen of the valves or preventing their perfect closure. The prognosis, such a lesion having been disclosed, usually is a gloomy one: for, what can we do in the presence of an organic change?

However, it is our belief, that a prognosis of this kind very frequently is not justified; that, as a matter of fact, we can do a very great deal. For one thing, we can give iodine, in whatever form happens to be our individual favorite. We can give iodine in doses as large as the patient is able to bear without iodism being induced; and we can persist in this course for an indef-

inite period. If we do this, we shall, in almost every instance, observe a marked modification of the murmurs for the better and in many instances, their total disappearance.

How explain this phenomenon? We may assume that, when these deposits upon the valves are freshly formed, they are within the influence of the circulation and thus may be reached by remedies carried by the blood and lymph. When, on the other hand, the deposits are old and have become cartilaginous and altogether extravascular, they cannot be so influenced.

How are we to know to what extent these deposits still are intravascular and amenable to treatment? Simply by prescribing the absorbent treatment and watching the result.

War educates the senses, calls into action the will, perfects the physical constitution, brings men into such swift and close collision in critical moments that man measures man.

—Emerson.

REMEMBER THE BLIND

If there be a pitiful spectacle, it is that of the totally blind, and this not so much from the fact of the blindness, but, from the knowledge that the vast majority of these cases are due to culpable neglect. Among our civic communities, Buffalo stands out as one in which blindness has been reduced to the minimum. There, ophthalmia neonatorum is almost unknown, and the reasons are these:

Every midwife in the city of Buffalo must be licensed; every midwife is required to put Cr  d  's 1-percent solution of silver nitrate into the eyes of every baby immediately after it is born. Of course, this also applies to physicians acting as obstetricians. The silver solution is furnished free by the city's department of health. The birth-certificates to be filed contain the question as to whether this preparation has been applied. Sore eyes occurring in the newborn must be reported to the department without delay. When a child is born under the ministrations of a midwife, a nurse from the bureau of child hygiene immediately investigates the case, and reports her findings. Birth-certificates must be filed within five days of the birth. How many, many persons have there not been rescued from blindness by these regu-

lations and their thoroughly effective enforcement!

Take it all in all, such work as this, together with the medical inspection and care of school-children, goes far to justify the increasing tendency of the day toward government supervision of our people. The old go-as-you-please methods have gone into the discard. The government will now tell you whether a physician is properly qualified to care for your health. You need not be afraid to send your child to the public school—he will be looked after, contagious disease, when present, is detected, and he even will be fed, besides being vaccinated, and all of it better than you could do these things for him: just as he is better educated in the learning that comes from books than he would be if the average parents performed that task.

ORGANIZATION AND ORGANIZATION

Elsewhere we print the reply of Dr. F. N. Richardson to our editorial of last month, entitled "The Old Order Changeth", which itself was written in comment upon a previous communication from Doctor Richardson. I do not think there is any further discussion to be had upon this aspect of the subject that would be profitable or enlightening. There is, however, one striking sentence in this last communication from the Doctor which seems to me to call for a little special consideration and comment all its own. Questioning the real advantage of high organization, he asks, "Is not Germany, and has she not for some time been, a highly organized community, in which individualism is almost absolutely destroyed? What a hellish thing she is proving to be!"

I believe that the view embodied in this question contains two very serious errors, which have deceived and misled many thoughtful people both before and since the outbreak of the present war. Before the war, these errors of thought deluded us into an exaggerated—almost a hypnotic—admiration of Germany's system of government and her national philosophy of life: since the war began, the self-same errors have beguiled us into an equally extravagant denunciation of the organization and system which previously we idolized.

One of these errors is, the very common syllogistic fallacy technically known as *post hoc ergo propter hoc*. "Germany is

highly organized: Germany has shown herself to be domineering, rapacious, conscienceless: therefore, organization makes for these qualities." But, there is no real relation of cause and effect established or capable of being established between these two predications, either by the science of logic or by the facts in the case.

It nowhere appears that Germany's organization had any causative part in making her rapacious and domineering. If there be any relation of cause and effect at all, it would be more in accordance with known facts to assert that her rapacity and her domineering aims had caused her to develop her high degree of organization, for the purpose of carrying out her vicious aims with so much the more thoroughness. But, that, of course, does not indicate any inherent vice in a high degree of organization *per se*; on the contrary, it clearly implies that high organization could just as well be made to serve the interests of praiseworthy aims, if applied to them.

At all events, it can not be shown, either by logic or by history, that Germany's organization contributed anything but desirable qualities to her national life and conduct—qualities of thoroughness and efficiency—no matter to what undesirable purposes these qualities may have been devoted. These are qualities that characterize every great criminal; but, it certainly would be the height of foolishness to assert, therefore, that they were the qualities that made him criminal. These qualities also characterize every great humanitarian; still, no one will pretend that thoroughness and efficiency make him humanitarian. It is these qualities, in the criminal as well as in the humanitarian, that make them *great*. They, therefore, in themselves are admirable qualities; and the process by which they are developed—organization—is, in itself, a desirable one.

However, there is, I think, a still more fundamental error in this attitude toward Germany's organization, which misled us, first, into an absurdly extravagant worship of it, and then into an equally extravagant anathema against it. This other error is not one of syllogism, but, of fact.

The truth is, Germany is not, and never has been (since she became an empire), organized in the normal sense of the term. It may, of course, be argued, with truth, that no nation is ideally organized; that the organization of every nation has defects and

anomalies. However, it is not a question of perfection, but, of kind. The very perfection and nicety of Germany's organization, indeed, ought to have raised suspicion in any thoughtful man's mind—certainly in the mind of any scientist or philosopher—of its normality. For, natural types of organization do not attain such four-square, mechanical niceness.

Germany's organization is not the normal adaptation, as between unit and unit and between unit and mass, that develops out of the trial-and-error, give-and-take experience of the organism. It is the artificial systematization of a community by a few arbitrary minds that have acquired a false authority by an equally artificial and unnatural process. It is an objective organization, not a subjective one. Germany's organizers pretend to have worked upon biological processes and along biological lines. But, in fact, they have, like most people who usurp the functions of nature, selected a few principles and phenomena of nature as a working-basis and ignored a thousand others equally influential.

I do not say that in the organization of every nation—I am speaking of modern civilized nations—such artificial, arbitrary interventions do not occur, rendering their organization to that extent artificial and abnormal. However, in the democratic nations, these are incidental and exceptional and, on the whole, their organization is normal and wholesome. In Germany, on the contrary, the entire system is of this artificial, forced character and only incidentally and exceptionally do we see normal, vital processes cropping out—to be promptly crushed by the self-appointed arbiters of her destiny.

Normal organization, whether in biologic organisms or in national communities, does not come from above, by forcible intervention, but, from below, by natural adaptation. England, France, America—all the democratic nations—have fought this principle out with blood and tears. Upon them, too, such organization used to be imposed. Germany is still living in feudal times; her wonderful "organization," at which we have been gaping with admiration, is "old stuff," which England and France and America long ago rejected. It is foolish to allow ourselves to be hypnotized by it.

However, it is equally foolish to permit ourselves, in the revulsion of our feeling, to denounce organization. Unnatural, ab-

normal organization *does* make for vicious and disastrous ends. Still it by no means follows that natural, normal organization is a vicious thing. Artificial organization, like every usurpation of, and interference with, natural processes, works ultimate injury to the race. Normal organization, the same as every natural process, in the very nature of things, works for the genuine advantage of the whole.

THE INDEPENDENT MEDICAL JOURNAL

Despite the utmost efforts of its enemies, the independent medical journal continues to live and even to flourish. Of course, under the strain, some of the weaker periodicals went under; but, then, these have been almost exclusively those for which no really valid reason for existing was present, excepting the interests of the one particular person backing it.

A good deal of consolidation has been going on. Just now, William J. Robinson seems to be omnivorous in his capacity for swallowing his contemporaries. Victor, the son, had scarcely announced the consolidation of *Pediatrics* with his *Review*, when the elder Robinson purchases *The Pacific Medical Journal*, going clear across the continent to secure it, and adds it to one of the group of journals he already published. *The Medical Herald*, which we have just been reading with appreciation, incorporates *The Kansas City Medical Index-Lancet*, and this, itself, was a composite, as may be seen by the name. And, by the way, Fassett's *Herald* is one of those which deserve to live, as one quickly realizes on examination of its pages, well-filled with interesting and instructive material from men who deserve a hearing.

We hope the work of consolidation will continue. There had been many medical journals struggling along on the one-cylinder principle. One man constituted the staff, comprising editor, business manager, and proofreader. Each of these had a small circle of readers, generally not more than a thousand. It followed that patrons of its advertising pages had but little chance of obtaining a fair return from their purchase of advertising space. Also, those who go to the trouble of preparing really valuable papers were likely to be disappointed at the almost or complete absence of any

evidence of appreciation on the part of the readers. But, take ten such journals and combine them; then we have ten thousand as a clientele from which to draw, ten live men to constitute the staff of the journal, and only one printer's bill. Each writer has ten times more readers, each advertiser has ten times more possible customers. The journal can better afford to secure good contributions, and, altogether, we have one strong periodical instead of a number of weak ones.

The question of locality, of local interests, is a very easy one, indeed; for, each of the ten members of the staff could have special space assigned for his own interests. We hope that those of our friends who have had nerve to start medical journals and who are getting tired of the unpaid work may take this matter into serious consideration.

Men will always act according to their passions. Therefore the best government is that which inspires the nobler passions and destroys the meaner.
—Jacobi.

THE FOOD AND DRUGS ACT

We have had now ten years' experience in the practical workings of the food and drugs act. It would be easy to quote statistics as to the work done, however, these would give little real information as to the enormous benefits conferred upon our people at large by this act. In its practical workings, much has amply proved the need of such legislation. Conscienceless greed has been checked in innumerable quarters; adulteration of food has been stopped; the marketing of spoiled food, poisonous through decomposition and unfit for human consumption, must now be rare, indeed. The average housekeeper may now have the satisfaction of knowing that she is getting what she is buying and paying for, and she recalls that she had mighty small chance of doing this before. The doctor who wants to prescribe drugs has a much better chance of getting these of good quality, although the very nature of many drugs precludes perfection here, since they alter in composition from day to day. We learn that even in the District of Columbia, under the very eye of the government, carelessness on the part of druggists in compounding such simple preparations as magnesium-citrate solution, chloroform liniment, and

spirit of camphor still is prevalent; also, that pennyroyal has been found to contain as high as twenty percent of sand, unicorn root containing fifteen percent of earth, and pipsissewa-leaves consisting almost entirely of stems. Further, that some of the varieties of aconite-root contain no aconitine.

However, these derelictions are as few now as they were common before the passage of this act. More than forty thousand times manufacturers have been called upon to answer charges under this act. Many thousand factory inspections have been made, more than three-quarters of a million examinations of food and drugs. Over six thousand cases have been tried in the courts.

One very gratifying result of these laws has been, to alter the relations of dealers with each other. Instead of a mad scramble to secure business by lowering prices to a level that would necessitate a corresponding lowering of quality, these men now form associations, with the object of establishing standards, and at the same time reputations based thereon. This is one of the most wholesome results of this beneficent law.

Another valuable feature has been, to stop the claims of the people who are curing cancer, tuberculosis, and other incurable diseases. To some extent, this part of the work is neutralized by the fact that so many periodicals open their advertising-columns to these claims, so that further legislation evidently is needed to close these gaps. The innocent development of drug-habits by use of remedies in which habit-drugs have been concealed has been about stopped. Since the Harrison antinarcotic law was enacted, it has vastly increased the benefits derivable from the Food and Drugs Act. There still, however, is much to be done in this line, since it is evident that far more narcotic drugs get into the hands of habitués than should be possible under these laws.

Mistake, error, is the discipline through which we advance.

—Channing.

THE LIBERTY OF DISCIPLINE

The severe training, the continuous hard work, the regular hours and habits, and the military discipline, all are factors in a much-

needed lesson that is being learned by the American people and that will make the people, as a nation, far more efficient in the end, while being of great immediate benefit to the soldiers themselves. We refer to military discipline, that bugbear of the personal-liberty crank, who was afraid that the National Army would founder on it as on an immovable rock. The rock was, and is, immovable; strict discipline is maintained in the training camps; but, instead of being refractory and restless under the unaccustomed restraint, our young men are learning that they can be truly free only if they have learned to obey.

Dr. Allan McLane Hamilton (*Med Rec.*, Feb. 16) cites the following passage penned originally by General Crozier, who was attached to the Pekin relief expedition (*North Amer. Rev.*, 1901). Concerning the American soldiers, General Crozier said: "They were the most intelligent of all the troops forming the expedition, as was strictly apparent from observation of their faces at the good opportunity afforded by the march past the staff at the entry of the Forbidden City, on which occasion also their neatness and fine appearance was most gratifying." On this occasion, the American soldiers were seen in comparison with the English, French, Russian, Japanese, and German troops; so, the test must have been a highly satisfactory one.

Similar praise of American soldiers has been voiced by General Pershing after seeing his own troops in comparison with those of our French and British allies. It is given freely to the graduates of training camps, whether in officers' schools or in the training camps of the National Army. It comes home to our personal knowledge, moreover, when we see the bright, alert young men in khaki, on leave of absence, walking down the streets of our cities, towns and villages; it is manifested in their brisk step and action, in their determined but not boorish or bullying bearing, in their bright, clear faces, and the intelligence displayed in every act.

When we think of the slovenly and, often, slouchy crowds of young men who trailed to the railway stations a few months ago, on their way to the training camps, and compare them with the young men coming back on a visit, soldierly, free-stepping young fellows with whom one wants

to shake hands, wishing them Godspeed, one can not but realize and acknowledge the means that were instrumental in working the remarkable transformation. Nobody would dream of doubting that these same young soldiers, once they return to civil life, will make far better citizens than those slovenly, slouchy young boys would have made. Nobody can deny that their military training has actually made them free men, worthy citizens of a free, democratic country. And this by the very instrumentality of discipline, the discipline that was, and still is, decried by unthinking and foolish people as undemocratic and un-American.

Un-American, forsooth! A big sermon might be written upon the postulate that liberty can be acquired only by the conquering of self, by the knowledge of obedience, by the subordination of the puny personal wish and wilfulness to the good of the whole. It is an ages-old philosophical truism, this, about the liberty of discipline, and it is being preached loudly in every soldier that walks our streets. If the American people take this lesson to their hearts, if they apply it to themselves, every one, not alone the soldier boys, a great additional gain will be recorded, and by so much more the war will not have been in vain.

ABOUT YOUR SUBSCRIPTION

Notwithstanding the increased cost of printing and of mailing, we have decided not to raise the subscription price for *CLINICAL MEDICINE*; at least, for the present. Nor shall we raise it later unless absolutely forced by circumstances and in order to avoid losing money.

Naturally, we hope that our subscribers will reciprocate by sending in their renewals promptly. If this is done without the formality of a statement having to be mailed, it makes for greater economy—an important factor at the present time. If, for any reason, it were to become necessary after all to raise the subscription price, this increase would not affect those subscribers whose subscriptions are paid up. For this reason, we suggest, doctor, that you place yourself on the safe side by taking advantage of our special offer of three years' subscription for the price of \$5.00. In this way it is possible to save one dollar and to

protect yourself against any advance in price that may become imperative.

In response to a gentle dun, one physician wrote, recently: "Excuse oversight. No, I cannot afford to miss the 'Feast of Good Things.' One article in last year's *CLINICAL MEDICINE* netted me enough to pay my subscription for fifteen years." How about you, doctor?

Let us beware of losing our enthusiasm. Let us ever glory in something, and strive to retain our admiration for all that would ennoble, and our interest in all that would enrich and beautify our life.
—Phillips Brooks.

A POINT IN GERIATRICS

When one has passed the meridian and the vital forces are no longer occupied with the sustention of growth and the development of power, the problem of life, of how to live, changes. With a never ceasing ebb of the vitality, with the growing accumulation of the infirmities and inconveniences of age, the outworks must be abandoned and the garrison concentrated more and more in the citadel, the keep. The whole business of living may be expressed in the one word—conservation.

Not many books have been written upon the prolongation of life, and those few have not attracted very general attention. "De Senectute" is known only to the dilettante scholar, who in the seclusion of his study delights himself with the charm of that wonderful thinker who twenty centuries ago carried his art to a height no successor has reached. Half a century ago, Erasmus Wilson rescued from oblivion Hufeland's work titled "The Art of Prolonging Life" and gave it to the English-reading world. Since then, the publications on this topic may be easily enumerated upon the fingers of a single hand—and we defy the ordinary medical practitioner to name one of them without reference to a catalog.

When Metchnikoff took up the subject of old-age, it came to the present writer with a singular aspect of novelty. Nascher has done and is doing good work in rescuing this matter from the region of fadism and placing it upon a firm basis as an important medical specialty. Curious, that this should be necessary! Doesn't every person want to live as long as he can? Doesn't he want to retain full vigor and the

capacities of usefulness and enjoyment to the very last? Yet, there is a wealth of good effort squandered upon some questionable surgical procedure, such as renal decortication, for the tiniest trickle of interest devoted to the peculiar conditions of the aged.

All of which I have said before—and shall, most probably, have to say again. For, it has long since been borne in upon me that the entire world is not waiting anxiously to hear what I have to say or to read what I indite; but, that only here and there some idle or curious person takes a moment of leisure to glance over these pages.

My old mother—God bless her—was in the habit of waylaying the minister after services and reproachfully informing him that “you preached that sermon on Sunday, May the fourth, two years ago.” The old dominie would get nettled; but he, however, should have felt complimented that at least one of his congregation was paying such close attention. I certainly feel that way when somebody reminds me of a suggestion made by me in years gone by.

Quite unaccountably, in all the studies on longevity at my disposal, no consideration seems to be given to the question of where one should choose to live, in order to live long. A valued correspondent takes up this matter. Writing from the Gulf Coast, he says: “We are 1300 feet lower here than in Ohio. That means more oxygen per square inch; this means fewer respirations per minute; this means fewer heart-beats per minute. I came here with a pulse-rate of 85 to 95 per minute; now it is 70. One can not overestimate the saving of energy—muscular and nervous force—by this change.”

The effects of exposure to cold are more complicated. The energy expended in sustaining the body-heat during a long cold winter is supplied by a corresponding consumption of calories; but, this entails an expenditure of force by the digestive system of which it hardly seems capable, when we reflect upon the growing enfeeblement of this function with advancing years. However, cold itself is vitalizing and exerts a certain influence in promoting the orderly functioning of the organism in general. Those who, accustomed to the north-

ern cold, avoid it by a resort to the warmer southern sections, do they not lose something?

The dilemma is easily overcome: Just hop out of your bed and don a bathing-gown, walk down to the wharf and take a header into the salt water of the bay. Rub your skin into a glow with a coarse towel and then take your coffee. The water is plenty cold enough to afford the desired reaction, but hardly more so than the lake-water at the Chicago beach, in which you disport in hot August. All the benefits of cold are secured thus, and, yet, one may enjoy sunshine and warmth all the year 'round at the same time. Doctor Dewees' argument, as above quoted, is well worth considering.

THE SALE OF ALCOHOLICS TO SOLDIERS

A few weeks ago, a newspaper dispatch stated, incorrectly, that the federal regulations regarding the furnishing of alcoholic drinks to soldiers had been modified. As a matter of fact, these regulations have been made much more stringent. So we are informed by the Commission on Training Camp Activities of the War Department. New regulations have been issued, the primary object of which is, to stamp out the illicit traffic in liquor, or bootlegging around army camps. Its provisions, however, do not apply to the serving of liquor in private houses to soldiers who are members of family or *bona fide* guests outside the “dry” zones established around military camps. Under the old provisions of the President's order, only the sale to officers or enlisted men in uniform was prohibited outside of zones. There was no prohibition against giving, serving or delivering it to a soldier in a private home or elsewhere outside such zones. In this way, bootleggers and unscrupulous liquor-dealers outside these zones were enabled to evade the law without violating it technically.

These inadequacies have been fully remedied in the new order, which makes it clear that anyone serving, giving or delivering liquor to a soldier, with the exceptions noted above, is subject to prosecution and punishment by a fine of \$1000 or twelve months' imprisonment, or both. The penalties are defined in the original law.

Leading Articles

The Progress in Surgery in the Last Twenty-Five Years

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois

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"SURGERY, as a science, made little impression on the world until about a century ago; but, since that time, it has aroused admiration in every part of the world. The progress has been greatest during the last seventy-five years and is due, principally, to the discovery of anesthesia and to asepsis, though the dissemination of medical literature, the formation of medical libraries, the organization of modern hospitals, the equipment of scientific laboratories, and the foundation of medical schools have been factors of great importance." (C. M. Nicholson.)

Sir Berkeley Moynihan, writing recently on "the gifts of surgery to medicine," says:

"In the earlier years of the nineteenth century, an acquaintance with the morbid processes attacking internal organs was based upon two sources of information, only—upon an inquiry into the details of the clinical history of any disease, as it developed, waned or progressed, and upon the examination of the parts involved after the death of the sufferer. . . . When the great gift of America to humanity—the discovery of the anesthetic power of ether—was brought to the aid of the operator, vast possibilities were at once apparent in the range of the surgeon's work. But, the dread of infection, indeed, the certainty of infection, held his hand for more than a generation, till the work of the greatest man our profession has ever produced, Lister, made the dream of the surgeon come true, made it possible for him with safety to carry through many pro-

cedures which before had been quite impossible."

Within the past twenty-five years, however, the trend of surgical progress has been toward making operations safer, thus reducing mortality and shortening gradually the period of convalescence; and, therefore, attention has been centered on, first, systematizing the methods of the preparation of the patient; second, anesthesia; third, simplification of technic; and, fourth, after-treatment.

Preparation Of The Patient

If we look back upon the surgery of twenty-five years ago and compare the results then with the results we are getting now, we cannot help but note the great mortality that, to my mind, was due very largely to the method of preparation. Those of us who were practicing at that time remember that our patients were starved and purged for about a week before the operation finally was performed, and our patient, therefore, was in a very weakened condition and his vitality was so lowered before the operation that the mortality was very high. Also, owing to the lessened resistance of the patient, most of the wounds became septic, and remained septic, because of the strenuous means in preparing the field of operation, which was then being performed with very strong antiseptic agents.

At the present time, after making a diagnosis, if the indication for operation exists, one day's preparation is sufficient; during which time, we examine the urine, test the blood as to leukocytosis and as to its coag-

ulation-time, as well as to its percentage of hemoglobin, and we also examine the various secretions and excretions in which we are interested for that particular operation. The differential leukocyte count is of great value in foretelling whether pus is present, while the coagulation-test is of special value in cases where tonsillectomy is to be performed or when hemorrhage is to be expected. And, if the coagulation-time is slow, that is, if it is more than five minutes, then, before the operation, a dose of horse-serum or coagulin or calcium iodide or other calcium salt, or, more recently, kephalin can be given hypodermically or intravenously. Then another coagulation-test is taken and, if the coagulation-time is normal, may the operation proceed.

In the preparation of the patient, as well as for the operation itself, prophylaxis is the keynote; and the things to be prevented are, shock and hemorrhage. We have already spoken about the subject of hemorrhage.

Concerning Shock

To prevent shock, nearly every author has his own method; and, in former years, there was more or less shock following every operation, owing to the long period of preparation, which had its mental effect on the patient, and also to the anesthetic and the method of its administration.

Moynihan, who speaks of the great value of anesthesia and antisepsis in modern surgery, also calls attention to the method, introduced by Dr. George W. Crile for the reduction of shock from abdominal operations, that is known as anociassociation. According to Crile, by means of local anesthetics (novocaine for the skin, quinine and urea for the parietal peritoneum), "a barrier can be erected around the area to be operated upon, so that no nerve impulses can be conveyed from the territory so isolated. The field of operation, that is to say, may be temporarily disconnected from the brain, not only at the time of operation, but, for periods of one to five days subsequently. . . . The fears which hover around the last hour before an operation are greatly modified by the administration of a small dose of morphine with scopolamine. A happy frame of mind is thereby induced, and very little nitrous-oxide gas is required to put the patient soundly to sleep." To the great discover-

ies of Morton and of Lister, this of Crile's seems to be the fitting completion.

George W. Crile, in his recent article, "The Progress of Surgery During the Past Quarter of a Century," says:

"The controversy regarding the physiological nature of shock still continues. Although the causation of surgical shock is under dispute, however, by various methods of prevention and of treatment, the dangers of this age-long menace of the operative clinic have been practically eliminated. The transfusion of blood is now practiced in the best clinics to meet the emergencies of shock and hemorrhage—the technic of transfusion having been so perfected during the last few years that it is readily and safely performed as a routine procedure in many cases in which the weakened condition of the patient precludes the safety of operative procedures unless the margin of safety is thus increased.

"The doctrine of anociassociation, the logical sequence of the enunciation of the kinetic theory of surgical shock, in 1910 is finding a steadily increasing number of adherents. The complete technic of anociassociation, which includes, not only the combination of narcotics with inhalation and local anesthesia, but, also, the use of the gentle and careful manipulations, is making possible the safe extension of surgical procedures into new fields and upon patients formerly considered impossible risks."

Although a great deal of very creditable work has been done by Crile, as above quoted, and by many other authors, still, it has the disadvantage of making the period of preparation rather long; which in acute cases is undesirable. Secondly, it has not yet been scientifically proven that the changes that take place in the cerebral cells are entirely consequent upon this anociassociation; and, thirdly, many operations (see series of articles by the author, "Everyday Surgery," in *CLINICAL MEDICINE*, 1910, '11, 12) can be performed under local anesthesia plus narcotics without any inhalation whatever.

The method that I have followed for many years is, to clean out the bowels, then, an hour before the operation, administer either a hypodermic of morphine sulphate, 1-4 grain, or scopolamine-morphine, or something which is less danger-

ous and more convenient, namely, hyoscine, morphine and cactin in suitable dosage, and then begin with the volatile anesthetic, if one is necessary.

Many operations, such as appendicectomies, herniotomies, cholecystotomies, can be performed under hyoscine-morphine narcosis alone; by giving one dose four hours, another dose two hours and a third dose one hour before the operation. The patient will then not see and will not be aware of anything that is going on, thus having no unnecessary fear of the anesthetic. Shock will then be reduced to a minimum.

If shock does occur, and transfusion is necessary, the simplest method is one described by Doctor Abelmann in *The Journal of the American Medical Association*. Many cases of shock are due to having the patient taken to the operating-room before preparation for the operation is complete. It is better to anesthetize the patient in some other room before he is brought to the operating-room.

Anesthesia

Within very recent years, great efforts have been made to standardize the method of anesthesia. A great deal of the immediate bad after-effects of the operation were caused by the anesthetic, the chief symptoms of which are, nausea and vomiting. It has been found in the administration of ether that vomiting can be absolutely prevented if the urine is rendered alkaline before the operation, and for this purpose alkaline waters or the administration of sodium bicarbonate (in 20-grain doses every hour before the operation until the urine is rendered alkaline) will prevent vomiting. If, however, the operation must be performed at once, then vinegar may be used on the mask as the operation is being finished. It is the consensus among experts that the vomiting is a consequence of acidosis and, therefore, can be prevented in the foregoing manner. It is also the general opinion that the safest anesthetic today outside of local anesthetic, is, nitrous-oxide gas for preventing the exciting stage, especially if hyoscine-morphine-cactin was not previously administered, followed by ether, by the drop-method, with the ordinary mask.

As stated before, even major operations can be performed, administering either scopolamine-morphine or hyoscine-mor-

phine-cactin, without any other anesthetic by inhalation; and this absolutely prevents shock and likewise shortens the period of convalescence, because of the absence of nausea, vomiting, and other untoward phenomena.

Asepsis

Great strides have been made in the simplification of our methods of asepsis. A quarter of a century ago, we were at the extreme of antiseptis. Now, however, especially with the oncoming of this great war, it became necessary to simplify our methods of asepsis. We have found that antiseptis is positively harmful, but, have observed that asepsis aids in the healing of wounds.

This has been made so simple that we can do major operations, not only on the battlefield, but, even *at patients' homes*. Especially with the simple dry preparation, which, with aseptic solutions, can be made with ordinary hydrant water—although sterile water is preferable and can be procured in any household. There is, therefore, no reason now to subject patients who have to be operated upon to long and dangerous journeys to a surgical center; for, with the simplification of asepsia, as well as with the simplification of surgical technic, the surgical center can be brought to the patient's home.

After-Treatment

After-treatment also has been very much simplified.

Postoperative pneumonia, which was a common complication, can be avoided by using less ether and cleaning and drying the patient, applying a pneumonia-jacket, and wrapping the patient carefully in blankets before he leaves the operating-room, and not subjecting him to drafts while he is being carried to his bed.

In days gone by, wounds were dressed every day, and it is no wonder that it took so long for them to heal. In most large hospitals, internes and pathological nurses, as the latter were called, were kept busy all day dressing wounds. Now, however, since we have learned to leave wounds alone and allow them to heal by primary intention, it no longer is necessary to dress a clean wound, from the time of operation until the sutures are removed. It is seldom now that a patient remains at the hospital longer than two weeks, if it is not a pus-case. There is no reason for dressing a

wound, unless there are special indications, and these indications are the usual signs of inflammation, such as pain, temperature, chills, leukocytosis.

Vascular Surgery

"The first successful end-to-end arterial suture upon a human patient was made by Murphy, in 1896, when he successfully united a femoral artery that had been severed by a gunshot-wound, although lateral sutures had previously been successfully employed by other operators. The brilliant investigations on blood-vessel surgery conducted by Carrel and Guthrie have shown remarkable results in animals, although the ultimate value, of many of these studies, for the human patient remains to be demonstrated. Carrel's triangular suture, however, has obviated the danger of narrowing the lumen of a sutured vessel and the consequent thrombosis; also, his researches have demonstrated that the success of blood-vessel surgery depends upon the observance of the most refined asepsis.

"Matas, in 1902, devised the method of aneurismorrhaphy, which has proved to be the most successful procedure for the radical cure of aneurism; and Halsted, in 1892, successfully ligated the first portion of the subclavian artery—a notable achievement in the field of vascular surgery. Even the heart no longer is a surgical *terra incognita*, it not only being repaired when wounded, but, may be directly massaged in desperate cases as a resuscitative measure." (Crile.)

In the advances in vascular surgery, we must not forget the recent operation of anastomosis between the saphenous vein and femoral artery for the cure of Raynaud's disease (symmetrical gangrene) and intermittent claudication. The results thus far with these operations have been encouraging.

Brain-Surgery

"In the field of brain-surgery, Sir Victor Horsley, of England, and Harvey Cushing, in America, are prominent, the work of the former in cerebral localization and of the latter in studies of the pituitary body being of special note. Tumors of the brain are now attacked with confidence." (Crile.) It is now possible to diagnose brain tumors with a great deal of precision as to their locality, by the Abderhalden test.

The advance in brain-surgery is largely a result of the improvement in the technic, which permits us to save more than eighty percent of the time by such inventions as Doctor Hoglund's motor saw.

Surgery of the Respiratory System

While operations upon the larynx, for the relief of conditions threatening suffocation, have always been employed, its successful extirpation was not accomplished until late in the last century, when in a Viennese laboratory it was successfully performed on animals; Billroth being the first to perform this operation on man. Since then, other surgeons have elaborated and perfected the technic, until it has become a generally accepted procedure for selected cases. The development of the two- and even three-stage operation under anociassociation has added greatly to the safety of laryngectomy, as of other desperate cases in which the margin of safety is too narrow to justify extensive operative procedures in one *séance*.

The possibilities of intrathoracic surgery received a great impetus from the invention, by Sauerbruch, of negative and positive pressure pneumatic chambers. By the use of differential pressure, Sauerbruch and Willy Meyer made great advances in esophageal and thoracic surgery, while the development of intratracheal insufflation by Meltzer has made possible the still further development of surgery of the chest, as has the control of the inflammation of the lungs by means of the monovalve apparatus. By the use of these various appliances, extensive resections of the thorax are practiced; the lung is explored for abscesses, cysts, and other tumors; and the thorax is opened for operations upon the heart." (Crile.)

The Ductless Glands

"The literature on the functions and surgery of the ductless glands, accumulated during the last twenty-five years, is equalled by that of no other branch of surgery or physiology. Kocher was the first to excise the thyroid gland for goiter (1878), and, in importance and volume, the reports of his operations and of his researches on the physiology of the thyroid gland lead the long list, closely followed by the reports of Von Eiselsberg, Mayo, Halsted, and many other operators and observers. Cushing's work on the function and surgery of the

pituitary body should be mentioned again in this connection. Laboratory researches upon the function of the thymus and the thyroid glands, the pituitary body, the adrenals, and of the internal secretions of other organs have opened a new and important field of therapy of vast significance to the surgeon as well as to the internist." (Crile.)

Speaking of thyroidectomy, the mortality in this operation has been greatly reduced, owing to the following reasons: First, the prevention of hemorrhage by previous treatment with horse-serum, and other biologic products; second, by selecting the proper time for operation; and, lastly, by preventing shock by performing this operation with local anesthesia, only.

Visceral Surgery

"Again we must credit Billroth with another important and significant surgical advance—the excision of the pylorus for cancer. As a logical result of the success of this procedure, practically every part of the alimentary tract is manipulated, opened, and, in numerous instances, excised. Following the lead of Sims, gynecological surgeons have mastered benign tumors and infections of the pelvic organs. In the treatment of appendicitis, timely operations have eliminated the former disasters of delay, and diseases of the gall-bladder are as successfully treated, as are appendiceal lesions. Under the searching clinical investigations of Sir Berkeley Moynihan and Mayo, duodenal ulcer has become amenable to surgical treatment; but, gastric ulcer, the relation of which to cancer has been strongly urged by the Mayo clinic, remains to be mastered. Cancer of the stomach and of the large intestine also present to the surgeon vast problems that must be solved before early diagnosis can be assured and the safety of operative procedures established. The two-stage operation under anociassociation promises to reduce the mortality in these cases by one-half. The surgical repair of perforations of the stomach and the intestines has been only partly successful. Great impetus to the development of the treatment of intestinal stasis has been given by the bold conceptions of Sir Arbuthnot Lane.

Genitourinary Surgery

"The especial operative contribution to genitourinary surgery during the last twen-

ty-five years is the development of the prostatectomy by either the suprapubic or the perineal route. This quarter of a century has been a great advance along diagnostic lines, however, as a result of the invention of the cystoscope and the utilization of the x-ray in connection with opaque solutions. Various efficient functional tests of the kidneys have been devised, also. Although the discoveries of Ehrlich and of Wassermann pertain more to the field of general therapeutics than to surgery, mention of neosalvarsan and of the Wassermann test should not be omitted, as both are constantly employed by the genitourinary specialist.

"The accuracy of diagnosis and the excellent immediate and end-results secured in surgery of the genitourinary tract have been equalled in scarcely any other surgical field." (Crile.)

In this connection, mention must be made of the experiments now being conducted by Dr. G. Frank Lydston, with the transplantation of testicles, for which he claims a great deal.

Bones and Joints

"Murphy's and Albee's bone-grafts and Lane's plates are at once suggested by this caption and need but to be mentioned. The transplantation of limbs successfully accomplished in the laboratory by Carrel has not yet proved applicable to human beings, on account of the tendency to autolysis of the transplanted part." (Crile.)

We should not here neglect to mention the great benefit to be derived from building up bone cavities with Senn's decalcified bone chips.

Cancer

"While not a ray of light seems to have penetrated the darkness which shrouds the etiology of cancer, yet, the mortality from this disease is continually falling. As in the case of tuberculosis, the wider-spread dissemination of knowledge regarding the early signs of cancer, and the necessity for the early removal of neoplasms of every character, together with the diminution of the terrors of the operating-table, have led progressively increasing numbers of laymen to seek early medical advice regarding new growths on outer parts and strange symptoms affecting the inner organs; while at the same time the general practitioner is more and more avoiding pernicious 'palliative' measures and send-

ing his patients to the surgeon, who, in his turn, has learned that in doubtful cases early exploration is imperative." (Crile.)

I have seen wonderful results from the use of radium, and my experience gives me the conviction that we should not allow any victim of inoperable cancer to die without trying radium.

X-Rays and Radiography

By far the greatest advance in surgery in the last quarter of a century is the discovery of the x-ray. This has enabled us to diagnose fractures which heretofore it was impossible to accomplish; it is very valuable in locating cerebral tumors; with opaque solutions it is of the greatest importance in the diagnosis of various gastrointestinal as well as genitourinary diseases, especially in the location of strictures; and is of the utmost importance in locating abscesses of the lung and other organs, thus making it possible to drain such abscesses and explore fields which before remained unexplored. Here we must note the work that is now being done by Dr. J. H. Carpenter who has injected opaque solutions into the vessels of cadavers and, by means of x-rays, shows pictures of the entire vascular system. While this has no direct bearing on surgical technique, yet, it revolutionizes our study of anatomy which is so essential a part of scientific surgery.

Before closing this article, we must not fail to remember that surgery owes a great deal of its progress to the systematizing of nursing and improvement in hospitals and the co-operation of the diagnostic and pathological laboratories.

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Causes of Bad Breath

By C. W. CANAN, M. D., Orkney Springs, Virginia

THE subject here discussed may seem commonplace and no doubt is fairly well understood, in a general way; still, a brief review may help to call to mind some long-forgotten hints of practical value.

While the exhaled air is principally composed of nitrogen and oxygen—the latter much less than at inspiration—it also contains a little aqueous vapor, ammonia, organic matter, and a little more than 4 percent of carbonic acid; the latter element being increased in the early stages of the infectious diseases, such as, measles, scarlatina, smallpox, but, is diminished in typhus fever. The temperature of the exhaled air is slightly less than that of the body, being influenced by the external atmosphere, although seldom falling below 92° F. Its temperature is raised in fevers, but, decreased in the algid stage of cholera and when death is impending; in many diseases, it is almost cold as the vital forces succumb. In perfect health, the human breath is almost odorless, it can be modified, often, by very slight causes, and in this way becomes valuable as a diagnostic sign.

Bad breath may be owing either to local causes or to systemic disease. Among causes that are local, there is dental caries; however, bad mouth-odor more often is a consequence of decaying food particles adhering to the teeth, as often found in persons of careless habits. The breath is very characteristic in alveolar pyorrhea, or Riggs' disease. Bad breath may arise from diseased conditions of the nasal cavity; especially so in chronic hypertrophic rhinitis. It is very fetid in gangrenous stomatitis and sickening in necrosis of the jaw. Diseases of the tonsils, larynx, and pharynx disagreeably influence the breath. In follicular tonsillitis and pharyngitis, the odor is due to decomposition of the secretions and particles of food filling the follicles and is like that of fecal matter, while that of diphtheria is suggestive of putrefaction.

In diabetes mellitus, there is a peculiar sweetish odor, likened to that of honey or sweet apples or new-mown hay.

In glaucoma, we have a peculiar breath known as *haleine safranée*, which is invariably present.

In pyemia, there is a peculiar breath, one that is difficult to describe, but, when once detected, will seldom be forgotten. The

breath of chronic alcoholism is very peculiar and very offensive, unlike any odor with which the writer has become acquainted.

Many volatile substances when entering the system through the ordinary channels are partly excreted by the lungs and are recognizable in the breath, among them being ether, chloroform, oil of turpentine and alcohol.

Offensive breath is always present in dyspepsia, whether gastric or intestinal. The reason is easily understood; when food ferments, gases and poisonous toxins are generated, these, with broken-down tissue-elements and other effete matter, are absorbed into the circulation, and nature, in its effort to assist in every way possible, throws them off through the lungs. When constipation is marked in these cases, the breath at times becomes very offensive, because large quantities of toxins and decomposing matter are being absorbed. Every physician knows the breath of aphthæ, or stomatitis, in children. The same is true for gingivitis, the result of mercurial or arsenical poisoning. In ulcers of the mouth and laryngopharynx, when due to syphilis, the breath is badly contaminated.

Do not forget that in uremia the breath has an odor that strongly resembles that of ammonia; owing to a failure on the part of the kidneys to eliminate urea. Various mineral substances, although themselves without odor, when taken into the system in sufficient quantities, cause a very disagreeable breath, due to deranged digestion or to ulceration of the gastric mucosa.

It is known that the odor of the breath may change temporarily from very trivial causes. Fits of anger or great excitement may and often do produce fetid breath.

The breath of some women always is offensive during their menstrual periods.

In feverish conditions of children, due to gastric derangement, the breath often has a sweetish odor reminding one of a combination of chloroform and ammonia. This peculiar breath often is noticed, only that it is more fetid, in children suffering from worms; still, it can not be relied upon, because many conditions in which there is irritation along the alimentary canal may give rise to similar, if not identically the same, bad breath.

There are certain individuals, seemingly in perfect health, who have a bad-smelling breath all the time, the cause of which is hard to find, but, if diligently sought for, will, as a rule, be found attributable to faulty elimination.

In cancer of the stomach and of the liver, the breath often becomes exceedingly obnoxious. The same is true in abscess of the lung, chronic bronchorrhea, and in allied conditions.

How to Combat Ill-Smelling Breath.

It obviously would be impossible to overcome a bad-smelling breath without treating the cause producing it, and, to consider this, would consume more space than would be granted here. We will, therefore, give the basis of treatment in the more important conditions to which physicians are called upon almost daily to attend.

The first and important thing to do is, to learn the cause, after which you can direct your treatment intelligently, your success depending upon whether the disease is curable.

At the very start, do not forget to examine the patient's teeth and gums thoroughly. You may find the cause of the bad breath to be either local or that poisonous toxins are being absorbed from under badly fitting crowns or abscesses at the roots of teeth; which not only may be producing ill-smelling breath, but, giving rise to a train of symptoms that have baffled all your skill to locate.

If the teeth are loose, gums soft and spongy, pus is welling up from the alveoli, you know that the patient has pyorrhea. Clean the affected alveoli gently, but, thoroughly, inject, or rub in with a stiff brush, a compound menthol solution three times daily, or better, still, see to it that local applications of chlorazene are made to the diseased parts. In addition, clean out the intestinal tract and keep it clean, by giving 20 grains of the three sulphocarbolates, midway between meals. Nuclein and the calcium salts are always indicated. In cases with very soft spongy gums, a lotion containing thymol and myrrh should be prescribed.

In conditions where the bad breath is the result of a gastric neurosis, clean the alimentary canal with calomel, podophyllin, and bilein, followed by a laxative saline. Prescribe a good digestive after meals.

In catarrhal conditions of the stomach and bowels, with fetid breath, we have found the nonalcoholic extract of golden-

seal to be a most efficacious remedy. If constipation be present (as it generally is), then, after a thorough cleanup, follow with your laxative and the sulphocarbolates, to maintain a clinically aseptic condition. The bad breath soon will disappear.

In all ulcerative conditions of the mouth and fauces, a mouthwash or gargle [spray? —ED.] should be prescribed containing chlorazene in physiologic salt solution. Another good treatment is, to have the mouth rinsed with a dilution of specific medicine of thuja. Also, ulcers should be painted with this thuja extract of full strength.

To sweeten the breath in incurable diseases of the mouth, larynx, and throat, prescribe the following: Thymol, 7 grains; borax, 30 grains; oil of nutmeg, 10 minims (dissolved in 2 drams of alcohol); water, 16 ounces. Label: Rinse the mouth freely or gargle often. The writer has also found potassium permanganate in 10- to 20 percent solution a most excellent gargle in these incurable cases. In conditions in which the physician finds it impossible to remove the cause, the following can be tried, and some one of them will be found to give the desired result: either oil of cinnamon, cardamom, spearmint, peppermint, nutmeg or cloves, or the seeds of anise, cardamom, coriander, spice or cloves.

In such conditions as tuberculosis, bronchitis, organic liver and kidney troubles, as also in many others the physician not only must treat the organic trouble, but, he must pay close attention to the skin, if he wishes to improve the breath of his patient. Systematic bathing and friction of the skin with a fleshbrush will work wonders in improving the breath.

To benefit the fetid breath occurring in certain women at the monthly period, viburnum and aletris, in the form of the concentrate, should be given throughout the month, but, withdrawn three or four days before the expected period and a good uterine tonic (alettrin, gr. 1-12; bryonin, gr 1-500; caulophyllin, gr. 1-6; macrotin, gr 1-6; helonin, gr. 1-6; hyoscyamine, amorphous, gr. 1-500) substituted. A morning dose of a laxative saline should also be given. Our experience has been that women of this class all suffer from pelvic congestion, dysmenorrhea; the menses being neither normal in color nor amount. See to it that all the organs of elimination are doing their full duty.

Enormous Prostatic Calculus Without Urinary Obstruction

By G. FRANK LYDSTON, M. D.

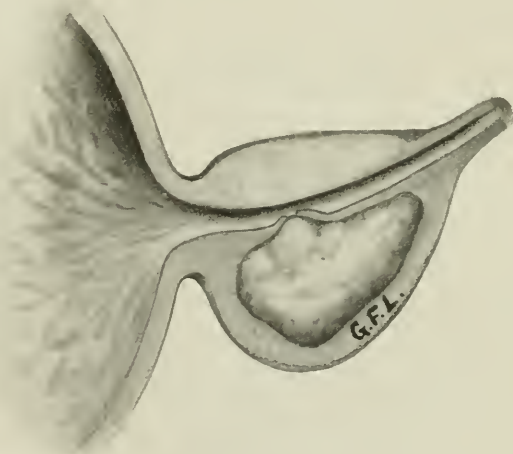
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TRUE prostatic calculi are composed either of secondary phosphatic deposit, or of a primary nucleus of renal or bladder origin and of varying composition, which has lodged in a crypt in the prostatic urethra, subsequently to become incrustated with laminae of phosphatic deposit. Secondary calculi may form in the prostatic urethra in large numbers behind a deep urethral stricture. Not infrequently they are found in the sac of an old prostatic abscess. Foreign bodies occasionally enter the prostatic urethra from the distal side, subsequently becoming the nuclei of calculi. Corpora amylacea are not true prostatic calculi. When a calculus of considerable size forms in the prostatic urethra, obstruction to the urinary outflow usually occurs. In the case herewith reported, however, a calculus of enormous size formed in the prostate gland without producing obstruction. The case was remarkable from the rapidity with which the stone was formed.

Case: Patient, 45 years of age, stockman. History of several attacks of obstinate gonorrhea followed by stricture. There was no history that would lead one to suspect that there had been any pus formation in the prostate gland, and no history of renal lithiasis. At the time the author first was consulted, there was a slight gleet discharge—gonococcus-free—with considerable prostatic irritation, attended by frequent micturition. The case improved under dilations, massage, and instillations, and passed from observation. A year later, the patient returned for a brief course of treatment and then again disappeared. At this time, there was no discharge, the vesical symptoms had disappeared and there was no appreciable prostatic enlargement. Eighteen months later, the patient again applied for treatment for a recurrent slight vesical irritation.

Examination showed a urethra free from obstruction. No grating sound or feel

could be elicited on instrumental exploration. On digital examination of the prostate gland, via the rectum, the author was astounded to find a large hard tumor in the median line, corresponding to the location of the prostate gland. This tumor was circumscribed, inelastic, unyielding, and obviously either bony or calculous, abruptly jutting into the rectum. The superlying tissues apparently were so thin that it seemed possible to free the tumor by merely scratching through its coverings with the



finger nail. Prostatic stone was diagnosed and operation proposed, but the patient declined to submit to it and sought other advice. A few weeks later, he returned to his home in the West, "cured" by internal medication.

Several months later, an abscess—evidently due to infected pelvic glands—formed in the right ilioinguinal region and was evacuated by the patient's family physician, giving exit to "a pint of thick pus." A few weeks after that, pus formed in the perineum. This also was evacuated by the doctor, who, finding the large calculus in the abscess, extracted it with considerable resulting trauma. The stone weighed 60 Grams.

Shortly afterward, the patient again was

referred to me. The condition of the case at this time was very unpromising indeed. There was a large median fistula in the perineum, extending upward in front of the rectum to the level of the internal sphincter vesicæ. The anterior wall of the rectum was destroyed, from the sphincter ani, to the upper extremity of the perineal fistula, with which it was continuous. The floor of the urethra was destroyed, from a point just anterior to the bulb, to the internal sphincter vesicæ. The opening in the rectal wall was about $\frac{3}{8}$ of an inch in width. A sound in the bladder could be plainly seen through the rectal lesion. The feces and urine came through the perineal and rectal openings,

alike. The author was fortunate enough to succeed with a plastic operation in this case, securing primary union. At last accounts, the patient was well and experiencing no urinary symptoms whatever.

A noteworthy point in this case was the fact that, notwithstanding the destruction of the floor of the membranous and prostatic urethras, there was no incontinence of urine.

The author has repeatedly insisted that the sphincter vesicæ internus is the true sphincter of the bladder, and that incontinence does not develop so long as it is intact and possessed of its normal tonus. This view is contrary to the more widely accepted teaching.

The Eliminative Treatment of Puerperal Eclampsia^{*}

By L. EDWARD PARMLEY, M. D., Winter Haven, Florida

WHILE the term eclampsia was introduced in the year 1760, the condition itself was known under a variety of other names ever since the days of Hippocrates, and it has been encountered by almost every practicing physician since that date down to our present day; indeed, it is almost impossible to find a clinician who has not seen and recognized the condition.

There is not a condition or disease in the long list of human ailments about the cause of which we have learned so much during the past century, and, yet, so little about the treatment; it is, indeed, alarming when we realize that the mortality is the same today as it was one hundred years ago. A condition so widespread, so common, studied and treated by so many physicians and of which the mortality remains unabated certainly challenges the attention of the medical profession; the more so, since we are progressing so rapidly in the treatment of other serious diseases. With these facts in mind, I venture to offer some of my own experience with this condition.

After receiving my medical degree and completing my career as an interne, I located on the St. Francis River, on the

Arkansas and Missouri state line, in what is known as the St. Francis bottom. Malaria is very prevalent in this district, mosquitoes go in swarms, pneumonia plays havoc every winter and spring in this section. The bottom is overflowed by the river almost every year and sometimes several times in a year. From this description, you can readily see that the conditions were very unsanitary. It was here and under these conditions that I realized the gravity of puerperal eclampsia.

As a hospital interne, I had failed to see many cases of puerperal eclampsia, and the cases that I had seen were not of the malignant variety, which was observed in the majority of those in this locality.

Eclampsia was frequently encountered in this locality and, as the patients usually gave histories of malaria and had enlarged spleens, it led me to believe that malaria was a predisposing cause of eclampsia. However, in this locality, the physician does not have the pleasure of watching and observing his patients as he should, as the custom is, to call a physician at confinement, only; he is seldom consulted previous to the eclamptic convulsion or the confinement.

Under the conditions described, I am frank to admit that the mortality among

^{*}Read before the Tri-County Medical Society, in Lakeland, Florida, July 10, 1917. Reproduced from *The Journal of the Florida Medical Association* for December, 1917.

my patients was almost twice as high as that quoted by the textbooks. It was here that I, so to speak, "got busy"; I did not lose any time in looking through the literature on eclampsia for the purpose of reducing the mortality among my cases. In going over the literature, I found that not one authority was able to give the definite cause of eclampsia; however, all authorities arrived at the conclusion that the cause was faulty elimination. Still, not one of them advised vigorous elimination, claiming that elimination through the skin by the use of hot-packs and pilocarpine was too depressing, while diuretics were contraindicated, inasmuch as the kidneys needed rest rather than stimulation. Furthermore, they said, elimination through the bowels was subjecting the patient to the danger of septic fever, as the birth-canal may become infected from the fecal discharge and the infection be carried up into the uterus in case a forced delivery were to be done later, as so often happens in these cases and, too, that these patients are not in any condition to withstand purging.

After following the treatment outlined by the textbooks and failing to reduce my mortality, I decided to try a vigorous elimination through the bowels; for, theoretically, the condition being caused by faulty elimination, free elimination should be the proper treatment. Moreover, I felt that I could not thereby increase the mortality, but, might possibly reduce it. I failed to get any results from the use of croton-oil or elaterium.

Purging Reduced the Death Rate to Nothing

After adopting the eliminative treatment, my mortality dropped to zero for the mother, and has remained there to this day; the infant mortality has been reduced, also.

I will report the following cases, some occurring before labor and some after, to illustrate in the different cases:

Case 1. Mrs. J. H., aged twenty-four. It was her first pregnancy. I was called to her at 5 p. m. She had had one convulsion before I arrived and had one in my presence. I gave her one half-strength tablet of hyoscine, morphine, and cactin, to control the convulsions, and then administered 15 grains of calomel and 2 ounces of castor-oil. I then went home.

She had another convulsion five hours later, at which time I returned and found her having labor-pains and the cervix dilated. She was given another hypodermic dose of hyoscine, morphine and cactin, same as before, and delivered, under chloroform-anesthesia, of an approximately 8-months' dead fetus. She was put on magnesium sulphate, 1 ounce every morning, for six days. She made a speedy recovery.

Case 2. Mrs. L. C. It was her seventh pregnancy; seven months pregnant. She had never had eclampsia before. I was called to her at midnight. She had had one convulsion before I arrived and had one a few minutes after I came. I at once administered one of the hyoscine-morphine-cactin tablets, half-strength, hypodermically; also ordered 15 grains of calomel and 2 ounces of castor-oil, to be given at once. She was given 1 ounce of magnesium sulphate every morning for one week. She had one convulsion the second day after she was put on this treatment, at which time she received another hypodermic of the morphine and hyoscine tablet. She made a good recovery and two months later I delivered her, the labor then taking a normal course.

Case 3. Mrs. M. B. This was her fourth pregnancy. She had her first convulsion at 7 p. m. and her second one two hours later, at which time I arrived. She appeared to be at full term. Labor-pains had set in and the cervix was dilated. She was given, hypodermically, one hyoscine and morphine tablet; also 10 grains of calomel and 2 ounces of castor-oil. Then chloroform was administered, after which she was delivered of twins. Afterwards, she received magnesium sulphate, 1 ounce daily. She made a speedy recovery, and she and the babies are alive and well today.

Case 4. Mrs. W. C. It was her second pregnancy. She never had had convulsions, but, five days after delivery, she had a convulsion. When I was called, she was given 15 grains of calomel, 2 ounces of castor-oil, and a hypodermic of the morphine and hyoscine. She continued to have convulsions for thirty-six hours, except when she was narcotized with morphine and hyoscine. She received magnesium sulphate, 1 ounce every twelve hours, for three days, after which it was given daily for one week. She made an

uneventful recovery. Mother and child are alive today.

Case 5. Mrs. D. H. It was her second pregnancy. She never before had had eclampsia. She was delivered by a midwife at midnight, and had a convulsion twelve hours later, at which time I was called. When I arrived, she was having her second convulsion and had a third convulsion thirty minutes after the second one. She was semicomatose. I ordered one hyoscine-morphine tablet, to be given hypodermically. I mixed 15 grains of calomel and 2 ounces of castor-oil, and administered it at once. Four hours later, she was given 2 ounces more of castor-oil. Thereafter, magnesium sulphate was given daily for

one week. She made a speedy recovery.

From the report of the above cases, you can readily see that the treatment followed was, to control the convulsions with morphine and hyoscine, and chloroform, if necessary, and to administer calomel and castor-oil, after which magnesium sulphate was given freely. The reason for giving the oil first is, that most of these patients are semicomatose and they do not appear to be so readily strangled on oil as on the thinner aqueous liquids. By following up the calomel at once with the oil or saline purgative, we do not get as much griping as if we wait longer with giving the saline or oil; also, I think, we can, in this way, give larger doses without causing salivation.

After Thirty Years—I.

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE. M. D., Chicago, Illinois

EDITORIAL COMMENT.—Professor Rittenhouse's long experience as a physician and teacher, and his open-minded, sympathetic nature have combined to give him an experience and a viewpoint making him an unusually fit counsellor and advisor of younger men. We anticipate much benefit from the series of articles commencing in this number.

THIS series of articles is the outgrowth of two habits that I formed many years ago. One is, the keeping of a commonplace notebook, and the other is the habit of encouraging my pupils and students to ask questions. I have been a teacher for fifty years—completing the half-century last month. The last twenty-five years, I have taught medicine, and my students have taken full advantage of the privilege of asking questions. They have not limited themselves to obstetrics, which has been the subject of my lectures, but, have brought to me their perplexities in every part of the field of medicine, and even in matters only indirectly related to our profession. They have constantly urged me to put into print my methods in general medicine, as well as those in obstetrics. The burden of their requests has been, that the ordinary textbooks are so ultra-scientific that they often fail to be practical, that, when the young doctor is in perplexity, he has to wade through too much theory before he can find out what to do. "Tell us just what you do and how you do it", they have often said to me.

I can understand their attitude of mind, because in the early days of my practice I felt the same want; while, when my textbooks failed me in an emergency, I was fortunate in having a friend and mentor to whom I could go and who always was ready with something practical in the way of advice. I am referring to the late Dr. Albert E. Hoadley. He was the most practical man I have ever been privileged to know, and he did more to make the practice of medicine a pleasure to me than any other man living or dead. No matter how perplexing the problem, he always had some practical, common-sense suggestion to make that helped to remove the difficulty. Professor Hoadley was one of those positive natures who instinctively adopt a "best way" of doing things, and he took pleasure in giving others the benefit of his methods.

The Note-Book Habit

My commonplace book is simply a blank-book in which I jot down any idea that I do not wish to lose, whether it be an original thought or a valuable suggestion from someone else. I began this habit

when I was eighteen, and, while such a book necessarily accumulates a good deal of rubbish, it also saves many an idea that otherwise would have been lost. For example, I happen to read of a new treatment for diabetes. I have no case of diabetes on hand at present; however, I enter the idea briefly in my note-book and when my next case of diabetes comes along I know just where to find the new treatment, if I want to try it. However, the chief value of such a note-book to a young man is, that, in noting down his reflections, he forms the habit of clear and definite expression. Vagueness is liable to become the bane of our thinking. To record a thought, compels us to make it more or less definite. Even an idea borrowed from someone else is rendered more clear and definite by one's trying to express it on paper. I feel that my commonplace book has paid well for the slight trouble it has entailed.

Object of These Articles

This series of articles will be simply an attempt, in my imperfect way, to pass on to others some of the things that have helped me, regardless of their sources, whether borrowed or original. In fact, there is very little in this world that is strictly original, so profoundly are we influenced by the words and actions of others. It happens frequently that an idea which we regard as our own on close inspection proves to be merely the sprouting of a seed dropped into the wind from some source already forgotten. To change the metaphor, we have simply milled it over and stamped it with our own personality.

It seems to me that there never has been a period in the history of medicine when there has been so much need of the personal factor in practice as at the present time. The tremendous strides made by science, in opening up new fields of knowledge bearing upon our profession, have tended to obscure more or less the practical application of that knowledge. We have had so many new tools placed in our hands that we are a bit awkward as yet in their use; and we sometimes are in danger of forgetting how excellent and reliable are some of the old ones that have been handed down to us by our ancestors. We can do better work with the magnificent equipment at our hands today if we realize what excellent work was done

by our predecessors of a generation ago with the very limited means at their command.

I can recall the day when we had not heard of quinine, bromide of potassium, chloral hydrate, antiseptics, fluid extracts, alkaloids, coal-tar antipyretics, and a host of other things that today seem as familiar and indispensable as the alphabet. I do not mean that all of these drugs were then unknown, but, that they have been brought into use as therapeutic agents within my memory.

When we recall what the men of an earlier day accomplished with their limited armamentarium, we are prone to lose patience with the therapeutic nihilists of today who, with all the wealth of resources at their command, persist in their attitude of superior wisdom, belittling the results that can be accomplished with the aid of drugs.

Folly of the Medical Nihilists

A few years ago, a well-known surgeon made an assertion, which was widely copied, to the effect that we possess practically no treatment for pneumonia. About the same time, a man who has some reputation as an obstetrician made the equally astonishing assertion that we know practically nothing about puerperal eclampsia; and there are obstetricians today who ridicule the idea that *veratrum viride* can be of any benefit in this condition. Such statements prove nothing, except that bigotry and narrowmindedness are not limited to the ignorant and that some so-called scientific men allow themselves to fall into that most unscientific error of placing theories above facts.

That surgeon above referred to simply did not know that hundreds of physicians were, as they now are, treating pneumonia successfully all over this country. He was so engrossed in his specialty that he did not stop to think that progress might have been made in other lines with which he was not conversant.

The man who claims to have proven that *veratrum viride* has no value in eclampsia has been at fault in his method. He has not learned how to use it. After I had tried it in two cases, I, too, thought it a failure. When, however, I read a report by Dr. A. Laphorn Smith of 38 cases treated with *veratrum* in the Montreal General Hospital, I saw that I had not really tried

the veratrum-treatment at all. I had merely been playing with it. After I adopted the proper method, I had no more failures.

Such facts show the need of more aggressiveness on the part of therapists. The men who are entering the profession at the present day are weak in therapeutics, and, what is more serious, they have a vague idea that it is growing obsolete; they have been told that it is not a science, and all that sort of thing. Of course, therapeutics is not an exact science. But, what of that? How many of the sciences are exact? Is surgery? Ask the woman who has had half a dozen operations and still is an invalid. Her answer might be illuminating. Let no one think that I am trying to belittle surgery. Its advance in thirty years is one of the marvels of its age. But, let us be broad enough to avoid that fault of small minds, the inability to see more than one great thing at a time.

The articles I have published in *CLINICAL MEDICINE* in the past have brought me so many letters from the readers that I am convinced that the doctor in practice feels the same interest in personal views and methods as does the medical student. "Tell me in detail just what you would do in these or those circumstances" is the burden of letters from all parts of this country and even from foreign countries. Of the hundreds of students who have taken my lectures in the past twenty-five years, one would suppose that most of them are readers of *CLINICAL MEDICINE*, judging from these letters, and that they still have the same propensity for asking questions as they had at college. It is my hope that the present series may lead to similar inquiries, for, the benefit by no means is onesided. I have learned much from these letters, maybe more than I have given.

It results from all this that these articles will be, to some extent, autobiographical. If this requires apology I herewith make it freely; but, I refuse to reform, because I am so constituted that, with me, life and work are too intimately blended to separate them.

Entering the Profession

Many of us who have watched the progress and development of medical education in the past dozen years have felt serious doubts as to the wisdom of the course pursued by those who are shaping its tenden-

cies. A score of years ago, medical education was lacking in thoroughness and was not properly regulated, with the result that diploma-mills flourished and even some of our largest colleges were notorious for the scandalous manner in which students were allowed to slip through into the ranks of the profession with little more than registration and the payment of fees. Today, this thing is regulated "to death". The length of the course has been increased beyond all reason, and further increases are in contemplation. The curriculum has been loaded up with more and more subjects, until the student is overwhelmed. It is utterly impossible for him to take in and digest the work marked out for him.

It should be possible for a man in any walk of life to begin his productive career by the time he is twenty-five. But, the young doctor cannot do it under present conditions, and, if the contemplated additions to a medical course are made, he can not expect to settle down before he is thirty years of age. The result will be that only the sons of the rich will be able to stand the financial strain. It is almost so now. The best and brightest of our young men will turn their backs on a profession that requires so much and gives so little.

I do not think there can be any doubt that in the past the best material for medical students has been drawn from those who have had to earn their way through college. But, today, many of those have had to give up in despair, while many others have finally forced their way through with a load of debt that will handicap them for years, even if it does not defeat them.

In the past few years, I have had opportunities of knowing something of the attitude of mind of many graduates in medicine, and I know that it is not wholesome. The discouraging burden of debt and the feeling that many of the best years of their lives have been sacrificed are largely responsible for some of the deplorable tendencies that are seen in the practice of medicine today. Weary of the long financial struggle, many a one yields to the temptation of "easy money," through the practice of abortion. With office-rent unpaid and perhaps a family in need of food and clothing, is it any wonder if here and there a young doctor looks longingly at the fifty or a hundred dollars dangled be-

fore his eyes and which may so easily be transferred to his own pocket? Many another loses sight of the high ideals of the profession and looks upon every patient with the one thought: "How much money can I get out of him?" Operations are performed, not because the patient's condition calls for them, but, because the doctor himself needs the money. All of which is steadily degrading our profession in the eyes of the laity. That such degradation is taking place, can not be questioned. The profession of medicine does not hold the place of honor in the minds of the public that it did forty years ago.

What Is the Remedy?

Criticism, of course, should be constructive rather than destructive. There is little use in finding fault with a condition, unless we are prepared to suggest a remedy. It does not seem difficult to diagnose the needs of the situation. They are sufficiently obvious to anyone who teaches medical students.

First, then, there ought to come about a radical reform in the manner of admitting students to the study of medicine. It is a common thing to find students in their third- and fourth-year courses who can not write correct English. Their examination-papers contain sentences without verbs, sentences that violate the fundamental rules of grammar. The writers have no intelligent idea of the use of capitals or of punctuation. Their answers show that they have no conception of the commonest laws of physics and that their knowledge of Latin is farcical. Many of them are of foreign birth and have not taken the trouble to learn properly the language of their adopted country.

Twenty-five years' reading of examination-papers of medical students has forced upon me the ever strengthening conviction that no one should be allowed to begin the study of medicine until he possesses a good working-knowledge of physics, English, and Latin. To condition him in these subjects, reduces the whole thing to a farce. He cannot and will not make up his deficiency in those three studies: he has not the time while he is trying to carry along his medical course. Besides, it is precisely in studying medicine, and not when he has completed his courses, that he needs—sorely needs—a knowledge of these three subjects. He cannot, possibly, study medicine properly without a knowledge of Eng-

lish and Latin and physics. His study of physiology, for instance, will be largely wasted labor if he has not a previous understanding of the laws of physics.

The entrance-examination in the three subjects named, then, should be so rigid and so hedged about with safeguards that not a single student could enter a medical course until he was properly grounded in these fundamentals and, be it said, that the possession of a diploma from either a high school or a college is no evidence that a person is well grounded in these three subjects.

Experience has shown that a diploma from a medical college is not sufficient evidence of fitness to practice medicine, hence, the state has supplemented the diploma with a searching examination hedged about with precautions against fraud.

If the admission to medical colleges were similarly protected, the medical course could be shortened and still leave ample time to fit the student better for graduation than is now the case. The professors in our medical colleges are heavily handicapped in trying to do their best work, when they know that very many of the class are so deficient in fundamental knowledge that the teaching is thrown away upon them.

I must admit that not all of the blame lies at the door of the medical school. Our public-school system has been tampered with by visionaries, who thought themselves educational experts, until efficiency of results has fallen to a very low ebb. The teaching of grammar has been emasculated, until the effect is plainly to be seen in the English used in our newspapers and even in our high-class magazines. There is something wrong in our methods of teaching languages, when high-school graduates are unable to read an ordinary Latin inscription on a monument. I have often found that men who had taken a full course in physics could not explain clearly why a bottle of beer will cool rapidly if placed under a piece of ice, but, very slowly if placed on the ice; or, to use a more practical illustration, why a room will ventilate itself automatically in cold weather, and not in warm weather.

The trouble can be summed up in three words: *lack of thoroughness*. This has been our bane in every field of human endeavor. This is one of the truths that the war is bringing home to us. It has been *our national failing*. We have attempted

so much that we have done nothing well. In our public schools as well as in our medical colleges, we need to cut down our curriculum and *learn to do a few things well.*

I believe, then, that the State should control the admission to medical colleges as rigidly as it now controls the license to practice. It may be argued that, if the colleges choose to admit students who are not qualified, it is their own affair. But, it is not so altogether. Students who are efficient also have rights. It is not fair that

they should be kept back by those who entered without being fit. It is now believed by many that medical education should be controlled by the nation rather than by the states. This would answer a uniform standard, besides having other desirable effects. Still, it is also true that there are strong arguments against it. On the whole, it seems to me a doubtful expedient.

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[*To be continued.*]

Is Treatment Something to Be Considered Scientifically?

By GEORGE L. SERVOSS, M. D., Reno, Nevada
Editor, "Western Medical Times."

EVERY day, every hour, and every minute, we are filled to the guards with diagnosis—and that is all right. But, we are also told, quite often, that diagnosis really is the only scientific thing connected with the practice of medicine; or of surgery, for that matter. We read paragraph after paragraph, column after column, and page after page about diagnosis, while treatment not infrequently has our attention for not more than a line or two, sometimes not even that much space being devoted to that portion of the subject.

It is true, absolutely so, that we should know what condition we are asked to handle; but, if the necropsy-reports of the Massachusetts General Hospital and other institutions are correct, then how many instances must there have been when the correct name was not given to a condition? For all that, many doctors who have, presumably, hit wide of the mark in making of diagnosis and naming diseases have been successful in the treatment of their patients; while, on the other hand, many have been unsuccessful in their treatment, even when their diagnoses, by necropsy or by laboratory-test, have been shown to be right. Furthermore, after diseases have been named (diagnosed), how many have gone about things in a scientific manner so as to bring back the normal?

Someone has said, "It is all in a name." Perhaps that is true in some connections; but, we don't think it is when that connec-

tion is a diseased condition. There is altogether too much treating of diseases, as such, and not enough of the underlying pathologic conditions. There are too many drugs employed that well could be omitted, many times one single therapeutic agent sufficing, if employed scientifically; that is to say, with sufficient knowledge as to its specific effect in the presence of certain abnormalities.

Of course, our patients want to know what ails them; however, their greatest interest is in when they are going to be restored to normal, when they are going to or whether they can be cured. We are employed to relieve the condition of the patient and to bring him back to the normal within the shortest possible time. Having made our diagnosis or reached a conclusion as to what physiologic function is out of order, it is our business to institute such treatment as will bring quick relief to our patient.

It has been said that there is no specific for any disease (named disease, if you please), and in that we agree. For, what is the average disease but the manifestation of many pathologic conditions, which, combined, go to make a condition to which we give some particular name. But, basing our ideas on observations reaching over quite a number of years, we believe that there are certain drugs that have a specific effect in certain individual abnormalities, and that the use of these as specifics for

the relief of such conditions is scientific—much more so than is the use of numerous other agents asserted to be good for those same diseases.

As for Fanatics of Diagnosis

We have kept our eyes on many of those men who interminably preach diagnosis, while having little to say about treatment, having looked into their therapeutic methods, have been shocked to find that they have been guilty of prescribing "shot-gun" mixtures, and those not infrequently incompatible, at times both chemically and physiologically so. We have seen potassium iodide and codeine sulphate ordered together, with the result that the alkaloid was precipitated as the insoluble iodide and, so, had to be removed by filtration, lest the patient get an overdose near the end. We have seen mixtures of anywhere from two to all the official bromides ordered in a single prescription, when one would have done the work. We have seen some prescriptions written without any seeming knowledge of chemical affinities or reactions, with the result that the patient did not get what the doctor intended. For instance, we have seen the bromide of strontium combined with sodium salicylate. Here the bromine and the salicylic radicle exchanged places, with the result that the less soluble salicylate of strontium was precipitated, because there was not enough water to dissolve this newly formed strontium salt. In consequence, the dose of the sodium salicylate was doubled, the patient received a "shake" mixture, while, naturally, the individual dose of the strontium salicylate was uncertain. At any rate, it is not good therapeutics to give the salicylates and bromides together in one prescription; besides, they are rarely, if ever, indicated in association, while one bromide will do just as good work as a dozen different ones. Likewise, it is possible that one salicylate will give the same therapeutic effect as any of the others. But, it is not scientific to combine them in one mixture or, as a rule, to administer them at the same time.

Aconitine, Veratrine, Gelseminine

Having made the diagnosis of some acute condition, what, now, is the usual step followed by practically every physician? It is, to clear out the alimentary canal, no matter what name has been given

the disease. And, as a rule, that is good treatment. In many instances, it obviates the use of any other thing, for, the trouble may lie solely in a dirty bowel; which means, the throwing of toxins into the system and thus unbalancing the functions or bringing about organic abnormalities. If there is fever, of a sthenic sort, the specific indication, in our mind, is aconitine; for, we know of no other agent that will more quickly and reliably restore circulatory balance.

You will be told by some that aconitine is too potent to be used. It is potent. So are a lot of other drugs; but, when handled scientifically or in the "know how" way, it is no more dangerous than are, probably, many other agents with which no fault is found on that score. Regardless of disease-name, aconitine will be found useful when there is circulatory unbalance. If the condition is sthenic, it is scientific to employ veratrine, and more particularly if there are indications of intoxication; for, in addition to restoring circulatory balance, it will serve to increase elimination. And this veratrine is another agent that is employed in numerous named (diagnosed) conditions, and without regard to that name, but, to relieve one specific abnormal condition.

The Eclectics taught us that gelsemium is a valuable remedy when there is flushed face, bright eyes, and increased temperature. Or, rather, they gave us back a drug that had been discarded because the whole-plant preparations varied so much in action. But, today, we have the alkaloid gelseminine, and it is a specific in certain types of fever, types that may occur in any one of several named diseases. It is scientific treatment to employ this drug when specifically indicated.

Use of Intestinal Antiseptics Rational

After the alimentary canal has been cleaned out as effectually as possible, many of us take steps to maintain it as clean as possible; for, we recognize that, if clogged with organic matter and its numerous resident pathogenic germs, it not infrequently defeats the purposes aimed at in our treatment dealing directly with the diagnosed conditions. Toxins are continuously being manufactured in a filled dirty colon and, if the source of these poisons is not removed or at least inhibited, we shall have this added thing to deal with. So, we give our

intestinal antiseptics—even though some have warned us against this being unscientific—and we get some astonishingly good results from them. In some cases, together with the initial cleaning out of the alimentary canal, they seem to make the use of other drugs almost, if not quite, unnecessary. So, as we know that such results have been obtained, we contend that our practice is scientific, no matter what the named (diagnosed) condition may be. And, what is science but knowledge?

Wound Antisepsis

Of late years we were told that the antiseptic treatment of wounds was not scientific. However, we were of the "old school" and did not believe that asepsis, in the presence of a probable infection, was worth much, if anything; so, we continued employing antiseptics in suspicious cases. We noticed that these infections seemed to clear up under our treatment, but, as it was not orthodox, for the time being, we kept quiet. Presently, there came the war, and then it was clearly shown that asepsis is useless—in fact, worse than useless in the management of battlefield wounds and that some antiseptic applications (such as Carrel-Dakin preparations) are required for satisfactory results. And here again was a so-called scientific idea almost, if not completely, knocked out. Now we, who clung to our old antisepsis ideas, have become "scientific" once more. We simply had studied our indications and did not believe that any infection could be overcome without the use of some effective germicide, and that such ideas were scientific has been proved so many times that count thereof has been lost track of.

Scientific Treatment

We could continue thus indefinitely, and, we believe, could show conclusively that treatment is a thing to be considered as scientifically as is any other branch of medicine and surgery. In our mind, it is the one thing of paramount importance to patient and doctor alike. Successful treatment is the thing the patient pays for and the thing he expects the doctor to give him. If it were only a name he were looking for he could, not infrequently, call in men who are not doctors of medicine, but, who, through laboratory practice, could tell him, to a certain extent, wherein lay the

trouble. But, that would not correct matters, and, so, the scientific therapist is really the important factor, after all.

In the end, it is the therapist, the one who directs the treatment, medical or surgical, who has the handling of the case; and, no matter what the diagnosis may be, it is the therapist who is called upon to show the ultimate results. And this therapist must know, regardless of what name (diagnosis) may have been given to any condition, how to meet the individual pathologic conditions as they may arise during the course of a disease. He must recognize the fact that no two cases of any named (diagnosed) disease, as a rule, behave in absolutely the same manner throughout their course; and, consequently, he must be able, scientifically, to apply the proper treatment in order to relieve every abnormal indication occurring in any of its stages; must know, for instance, when to change from one febrifuge to another or when to alter any other therapeutic agent he may be employing.

If treatment were considered as scientifically as is diagnosis, it is our belief that many successes would happen where failures have occurred in the past. We have been giving enough attention to the specific application of our remedial agents. We have been prone to treat diseases as diseases and to ignore the patient, in our zeal to diagnose (name) correctly a condition and then so treat it as such. We have not been very scientific in our treatment, and it is little wonder that we have had so many therapeutic nihilists in our ranks. It has not been fashionable to practice curative medicine, and, for the simple reason that the question of treatment has not been considered a thing demanding the knowledge required in the making of correct diagnoses. So, if one were to make a great reputation for profound knowledge, the field of diagnostics offered him the best opening. There he could show his patients some awe-inspiring apparatus for making a correct diagnoses, while in the field of therapeutics there was nothing of the kind. Hence, a considerable number of us became diagnosticians and placed treatment far to the rear, as not leading to greatness.

But, the pendulum is slowly, but, very surely swinging back, and patients are beginning to demand the services of a physi-

cian or surgeon who will do something other than just give a name to a condition and then leave him to the ministrations of dear old Mother Nature, or else institute some nondescript sort of treatment, just to be doing something, and so endeavoring to satisfy the patient and hold him as such. The patient is going to demand more scientific treatment—treatment based upon the existing conditions, and not upon the name of a condition as a whole. He is going to employ the therapist who meets known indications with their known specifics.

Now, do not think that we would, for a single instant, belittle diagnosis, for, we do not; but, we believe that this is something that should be carried a step farther than simply naming a collection of pathologic conditions a concrete disease. A

diagnosis, in our mind, to be a thing correct and worth while, should tell us something or everything about every variance from the normal existing within the whole. Then and then only, would it be something worth while. It would lead to the institution of real, and scientific treatment; treatment that is truly scientific.

In reply to the question of our title, we believe we can say "Yes" at all times; furthermore, we believe that you will agree with us. We do not believe that the physician who employs hit-or-miss therapy is, ever was or ever will be a success, irrespective of how good a diagnostician he may be. He must consider treatment, and, likewise, apply it, from a scientific standpoint, else he will, as a physician who treats the sick, be forever mediocre.

A Study of Anemia

By V. E. LAWRENCE, M. D., Ottawa, Kansas

ANEMIA means, literally, an absence of blood; technically, it is "a deficiency, an insufficient formation or excessive consumption of the blood or its most important constituents, as red corpuscles and hemoglobin." Any change in the respiratory function of the blood is called anemia. This may be caused by a diminution of the red corpuscles or of the hemoglobin, or in a lowering of the color-index. These changes affect the function of the blood; that is, its power of distributing oxygen.

These conditions here named are present in proportion to the severity of the disorder. In chlorosis, the lowering of the color-index predominates, while there may be the normal number of red corpuscles. In pernicious anemia, there is always a diminution of these corpuscles, while the color-index may remain normal or even be raised. Artificial anemia, produced by intentional hemorrhage, is the condition usually brought about for the purpose of investigation, because this can be done quickly and easily and in this condition the rapidity with which these important constituents are renewed also can be approximated. These investigations are commonly made on healthy animals.

In man, the study, is carried on under pathological conditions. The normal blood

should contain about 5 million red globules to the cubic millimeter. By far the greatest component of the red cell is hemoglobin; it comprises about 14 percent. of the whole blood. The red corpuscles constitute about 45 percent of the whole blood, and the amount of hemoglobin in each globule is about 27 percent of its entire mass or 86 percent of its solid ingredients. The chief characteristic of hemoglobin is its ability to absorb oxygen and its readiness to exchange it for CO_2 .

As anemia consists in a lessened number of red globules or a lessened quantity of hemoglobin, or both, the symptoms of the disease are those brought about by insufficient oxidation. In fact, the chief function both of the red corpuscles and of hemoglobin is that of carriers of oxygen. Jolly reports a case in which, from hemorrhage of the stomach, the number of red corpuscles was diminished, from the normal of 5 million, down to 650,000 to the cubic centimeter and in which recovery followed. This was a loss of almost eighty percent. In healthy animals, repair is very rapid and, where hemorrhage is mild, repair may equal loss. Hemoglobin increases rapidly. During this period, many nucleated red corpuscles can be seen.

While anemia often is a secondary condi-

tion of such diseases as rheumatism, malaria, tuberculosis, lead-poison, cancer, syphilis, and intestinal parasites, the one here considered is merely the idiopathic, or essential, form. The leukocytes may vary or not. Changes in them may be related to anemia, although their behavior affords a means of diagnosing the different forms of the disease. Anemia may be divided into those with a positive and those with a negative blood-picture. Of the former, or positive, may be enumerated pernicious anemia, splenomedullary leukemia, lymphatic leukemia, mixed varieties of leukemia, and parasitic anemia.

Blood Changes in Anemia

The following changes are found in every anemia: (A) A great diminution in the number of red globules, even down to 600,000 per Cc. (B) Great variation in the shape of the blood-corpuscles, which may become oval or hourglass-shaped. (C) Alterations in the sizes, normal cells being of equal size, while those of anemia may be much smaller. (D) The presence of nucleated red blood-corpuscles; while normally none are present.

None of the foregoing features is pathognomonic of any particular variety of severe anemia.

The normal number of white cells per Cc. varies from 5,000 to 10,000. Films show four varieties quite easily distinguished, and these may be classified as small lymphocytes, large lymphocytes, polymorphonuclear cells, and coarsely granular eosinophile corpuscles.

In certain diseases, the following abnormal white cells are found: The myelocytes are large white cells. The basophile corpuscles; these latter being smaller than the former and compare in size with the lymphocytes. The protoplasm, however, contains many granules which stain blue with Jenner's stain. In pernicious anemia and in lead-poisoning, the red corpuscles, instead of becoming pink by Jenner's stain, present small blue specks in their protoplasm.

Pernicious Anemia

Pernicious anemia is an insidious disease, the prominent symptoms being, progressive loss of muscular power, progressive pallor, loss of weight, but, not necessarily loss of volume. The diagnosis seldom is made in the early history of the disorder,

but, is generally arrived at after a steady or uneven progress and after the usual treatment for anemia has failed to give the usual medicinal results. By this time, there may be a marked diminution of hemoglobin, even down to 30 percent of the normal, with a still greater loss of the red cells, which may fall to 25 or even 20 percent of the normal. The color-index is high; and this is the pathognomonic symptom of the pernicious anemia. Blood films show all these changes in all the several forms of anemia and there usually is an increase in the large white cells. When these conditions are found, it is safe to arrive at the conclusion that there is pernicious anemia. The diagnosis, however, can not be made without there being a low blood count, although there may not be a high color-index. It should be remembered that the patient may have periods of improvement, even in pernicious anemia and when the blood count may even reach normal. This is one of the reasons why this disorder is seldom diagnosed early.

Various Forms of Leukemia

In splenomedullary leukemia, the earlier stages of the disease present no symptoms, although later there is a falling off both of the hemoglobin and of the red cells; and this may reach to a marked degree. A large increase in the number of leukocytes is the essential diagnostic feature, which may range from 200,000 to 1,000,000. Only in lymphatic leukemia, can such an increase be found. The two can be distinguished by the differential leukocyte count, the characteristic point in which, in splenomedullary leukemia, is, the large number of myelocytes (i. e. cells with nuclei), which may reach from 30 to 50 percent of the white cells. When anemia does occur, it is indicated by a fall in the hemoglobin to a greater extent than by the loss of red cells.

The disease generally lasts from one to three years. A marked clinical feature is, the enlargement of the spleen, which may cross the median line and even reach the right iliac fossa and continue down into the pelvic cavity. The splenic enlargement is not accompanied by enlargement of the lymphatic glands.

That form of anemia known as lymphatic leukemia is rather likely to affect children, while the splenomedullary predom-

inates in adults. The disease is invariably fatal within a few months. Anemia here is more pronounced than in the splenomedullary form. Either the anemia or the enlargement of the glands of the neck, axilla, or groin may first appear. Epistaxis or other forms of hemorrhage or of purpura often are symptoms. A frequent symptom is excessive mental irritability and loss of appetite. There are cases where there is no glandular enlargement, and the case can be diagnosed only by the blood count; but, usually, there is general glandular enlargement, which may include splenic enlargement. Serous inflammations and fever are common symptoms, just as splenomedullary leukemia, in Hodgkins' disease, and in pernicious anemia. There is a great increase in the leukocytes, their number reaching 20 or 30 thousand, and more often 80 or 100 thousand or even 1,500,000 per cubic millimeter. Whatever the number of leukocytes, however, the most striking feature in these cases is, the enormous relative increase in the number of small lymphocytes in the differential leukocyte count. There may be from 90 to 95 percent. The red cells and the hemoglobin are relatively diminished and there is present the usual phenomenon found in all forms of serious anemia. The color-index, as a rule, is 1, but, toward the last may become greater than 1.

Most cases of leukemia belong either to the splenomedullary or to the lymphatic form. Some, however, show symptoms of both. That is, there are both enlargement of the spleen and glandular enlargement. There is the absence of early anemia and the increased leukocyte count. We will merely mention the parasitic form.

Diagnosis and Treatment

Almost everything that has already been said has reference to diagnosis. This is the most important and the most difficult point to be considered. When once it is determined that the disease is of the simple form, all concern regarding the issue is immediately removed. Doubtless many cases of

simple anemia are passed over undiagnosed. When it is established that a case belongs to one or more of the other varieties, the outcome of the case also is conclusive, because the former most surely and most promptly responds to treatment, while the latter moves on to an almost certain, fatal conclusion.

In the simple type of anemia, treatment is as simple as it is effectual. In the latter, while it still is simple, it is as futile in it as it is efficacious in the former. But a few words need to be said as to therapy. Iron and arsenic are the essentials. Little, if any, more is needed. The patient quickly and most pleasantly responds. The rapid circulation recedes to normal. The cold extremities become warm, the muscular weakness diminishes, the color of the skin improves and the mental despondency is changed to cheerfulness. Life assumes a new aspect and the patient returns to the former normal activities of life. In the other forms of anemia, under the same treatment, there is an absence of all these responses to treatment and the disorder gradually progresses and continues to a certain and not far-distant fatality. The iron should be given in large doses, before meals and at bedtime. Bland's mass, in 5-grain friable pill, I have found the best form in which to give iron.

While the patient is suffering from the prominent symptoms in whatever form, he should confine himself to bed for the greater part of the time. Glycerin (pure, with no fatty acids), in tablespoonful doses three times daily is, on good authority, said to act finely even in cases of pernicious anemia. In pernicious anemia, there is a deficiency of hydrochloric acid in the stomach. Experience has shown that full doses of this acid, together with abundance of red beef, are beneficial. It is not uncommon for one form of iron to give results when another will not. Organic iron succeeds in some cases and fails in others. Iodide of iron, iron arsenite, iron phosphate, et cetera all have their uses.



Dichloramine-T in the Treatment of Chancroid

By EUGENE HOLT EASTMAN, M. D., Chicago, Illinois

IT has recently been my pleasure to have used Dichloramine-T in the treatment of chronic chancroid. The employment of the remedy in this field being quite new, it is with considerable interest and no little enthusiasm that I report results.

My patient was a male, age 27, of pure American extraction, blond, muscular, and of the type of westerner which portrays resistance in every fiber.

June 5, 1917, five days after intercourse with a Mexican prostitute, a sore appeared on the left side of the glans near the frenum. The patient immediately used the old treatment of calomel powder and caustic, but, without any good results. He then consulted a physician who burned the sore three times, causing it to spread. This doctor gave him a powder to apply and said that he thought the sore would dry up very quickly.

Two weeks later the patient was in another city and applied to another physician for relief. This doctor burned the sore and it continued to spread. Again patient was transferred to another city where a third physician was employed. This man was a physician of very good standing in one of our large western cities and pronounced the sore syphilis, administered salvarsan, which was followed up by the use of iodide of potash. The patient also was told to dust the sore with calomel powder. Once again our patient was transferred and a fourth physician was employed, who said the sore was a hard chancre, and burned it. Patient then moved to Chicago and came to my office for treatment. This was November 24, 1917.

From the appearance of the lesion when I first saw it, anybody would have been justified in making a diagnosis of syphilitic chancre. It was ovoid in form, about one centimeter in the large diameter and lay on the left aspect of the glans extending from the frenum upward to a width of about 0.75 centimeter, the outer border being close to the lips of the meatus. The glans was destroyed down to the submucous coat and the base was much indurated. It bore a

clearly punched out appearance and was discharging a dark pus unattended with any disagreeable odor. But, the peculiar part of the case seems to be the fact that the third physician to whom this patient applied, made a Wassermann with a negative result. I disregarded this in my diagnosis on the ground that there must have been something wrong with the Wassermann, yet it came from a laboratory of very high standing. My diagnosis thus far was syphilis. I made a smear from pus and scrapings and was informed by my laboratory of the presence of the bacillus of Ducrey and the absence of spirochetes. Local treatment was commenced also with mercury, but, after using mercury over a sufficiently extended period without results it was abandoned and strictly local treatment was adhered to.

My local treatment consisted of everything that I could think of that might be of service in such a case. It included iodine, phenol, nitrate of silver, permanganate of potash, trichloroacetic acid, and silvol. In employing silvol I applied the pure crystals until the heat of the body dissolved them into a molasses like consistency and then applied a bandage. All of this was without any appreciable result. In fact the lesion seemed to be spreading. At this time when both the patient and myself were discouraged, my attention was called to dichloramine-T. This was after weeks of fruitless treatment. The first application of dichloramine-T was used in the 5-percent solution. It was painless and at the end of one week the sore showed some tendency to improve. The strength of the solution was then increased to seven and one-half percent.

The method of application was simple. I packed the ulcer with cotton, having first cleansed and dried it, then saturated the cotton with dichloramine-T solution dropped on with a medicine dropper. Cold cream was applied around the neighboring field and the organ bandaged. In using cold cream it will be noticed that I deviated somewhat from the technical instructions,

not having any benzoin handy, but, it seemed to prevent any infringement of the antiseptic upon normal tissue and served such a good purpose and was so easily applied that I continued it throughout the case. On one or two occasions when the patient dressed his sore while away from the office, he was too liberal with Dichloramine-T, some of it getting on the scrotum, the result being that a mild dermatitis ensued which, however, disappeared upon the application of cold cream.

The sore was dressed in this fashion every twelve hours, the patient meantime continuing his hard work of repairing locomotives. At the end of four weeks the sore was about half healed and I increased the strength of dichloramine-T to 10 percent. Four weeks later the lesion was perfectly healed. At no time was there any discomfort from the use of dichloramine-T and when we consider the intense suffering patient underwent from the use of

some of the older excoriating chemicals, we can fully appreciate the comfort of a painless antiseptic.

Dichloramine-T, being in a solution of oil, seems to fulfil the very want for which we have searched in our quest for a perfect antiseptic. Caustics of course are antiseptic but are objectionable in that they burn in their path an impenetrable wall under which infection may be sealed up only to spread by metastasis; and, with dichloramine-T there seems to be no possibility of any such danger.

This case persisted nine months. It was under treatment in my office four months. Two months of old routine treatment only made it worse. The same time spent with dichloramine-T effected a cure. How long it might have persisted under the old treatment is interesting to conjecture. I shall continue the use of dichloramine-T in these cases as routine treatment.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[Continued from March issue, page 213.]

The Mysterious Immortal Entity

MULTIPLE personality and the subjective mind are both established and well-recognized scientific certainties; proving beyond the latitude of peradventure that there exists immortal mystery in that somber unexplored realm where new life and consciousness spontaneously leap into the void of violently extinguished natural faculties. But, these are puzzling speculations, over which one may ponder and ponder in vain. There is no possibility to discover e'en one glint of guiding light.

The shams and subterfuges of spiritualism are rank and stupid frauds, developed and demonstrated through the manipulation of sleight-of-hand and ventriloquism and trivial adjuncts of minor importance. If spirits can, and do, respond to mortal solicitation, I might have been able to establish some such communication, for, I have diligently sought such aid in the spectral domain, in the solitary midnights of the torrid climate, where the purple silence echoes no chimes to wake up the dumb

sleepers profoundly reposing in the weird grasp of the tombs of dead and nameless nations; where superstition deems the low, sweet sigh of zephyrs and the soft, plaintive murmur of mountain rills the voices of the dead, while quaint forms seem to flit in the pale moonbeams through that quiet solitude, when the thrilling note of the nightingale resounds above and the plaint of the whip-poorwill is near; where sweet tones like music float in the air, seeming the chant of choirs singing far away. But, look, and, lo, the light fairy-forms are but the shadows of bushes swung silently by the lazy wind, the frail beings of the mind dancing in air; yea, the enrapturing songs, the heavenly chords, as you strain your ear, are but the mocking sounds emitted from a rent arch—the sportive diversion of the playful breeze.

Hence, the sheer force of spectral absence from such an hour and place needs force one to conclude that all ghost-stories are told for the purpose of deluding; that no spirit ever rises from its last eternal home, to roam the chilly solitudes of spectral realms, that sad, dismal, distempered minds

breed specters and their gloomy trains that the "silent city" is as lonely and lifeless as are empty chests of lead. For, although superstition proclaims that abode of the dead to have been peopled over with ghosts, none may be seen by the wakeful eye.

However, the phenomena of multiple personality bears no relation to ghost-stories nor to the humbuggery of spiritualism. It is a reality too familiar to scientific medicine to be placed under skeptical debate, save as to revealing its true character; and this will bear as much discussion as the question about death and immortality—and will ever remain as deeply enveloped in mystery as are they.

There may be deductions drawn from anatomy, attributing the phenomena to the disturbances of nerve-centers and pressure upon the brain, and like sympathetic influences. But, they do not elucidate the mystery of the absolute obliteration of one brilliant intellect in a moment, and the development of another, not less bright, in the same body, and then the original mind again being resealed on its natural throne of reason, following new violence or a surgical operation that mayhap removed some pressure from the brain. I have known of trephining operations that restored normal intelligence, although I have never participated in one.

The Unsolvable Problem

However, all this does not clear up the mystery of two antithetic rational periods—the natural and the extraneous. Were there a state of insanity tantamount to oblivion of the natural faculties, and then a return from this to a natural state—the same as from the other rational intelligence of extraneous origin to natural consciousness—the problem might simplify itself. This is the unsettled feature to which the anatomical theory affords no solution. The victim of accident is dead, to all intents and purposes, and, as applied to the natural life involved, many never return to normality.

But, this does not modify the attributes of multiple personality, the natural having been superseded permanently by the extraneous. The return to the natural state but intensifies the extraordinary mystery that no natural knowledge can even attempt to explain.

The Divinity alone knows the immortal secret, that reveals marvelous wonders that

we are unable to understand; the startling certainty of mutability of intelligence, so positive that every trace of past life disappears, and in place of which a new birth, as it were, supervenes and develops the faculties of manhood and womanhood with no stage of childhood and youthfulness to cherish as sweet or regretful memories. An adult infant is a marvelous prodigy, endowed to learn, appreciate, love, suffer, all the tender traits of cultured refinement rapidly developing.

"The cause of all impiety and irreligion among men is, that, reversing in themselves the relative subordination of mind and body, they have, in like manner in the universe, made that to be first which is second, and that to be second which is first; for, while in the generation of all things intelligence and final causes precede matter and efficient causes, they, on the contrary, have viewed matter and material things as absolutely prior, in the order of existence, to intelligence and design; and, thus departing from an original error in relation to themselves, they have ended in the subversion of the Godhead."

That is, according to Plato, it is thought that generates the body, not the body thought. The body is merely a channel of thought, the means by which thought is brought into use and expression, and is not the generator of it.

Let us make this plain, for, it is the true order of being, and the understanding of it is necessary to the understanding of telepathy.

Smoking strong Mexican tobacco is a native vice deadly in a high degree, as demonstrated by the following story:

A wealthy stock-raiser, residing forty leagues from my hamlet, once wrote me that he was rapidly running down, was nervous, had no appetite, and could not sleep, and he importuned me to visit him. When I arrived at his place, situated some 6000 feet above the sea, it was after noon, and I found the old man seated on the portico smoking a pipe the bowl of which was nearly as large as a teacup, with a stem more than a yard long, this huge affair supported on a rack. I lost little time in telling the gentleman that, if he expected any substantial relief, he must first of all abandon that monstrosity. Whereupon he as promptly told me that in that case there would be no need for my services and that I was to receive pay for my visit in the morning.

Upon a table beside him, there stood a basket of fine apples, and on this table he laid his pipe when his smoke was finished. His yard was full of rabbits—hundreds of them. I removed the pipe-stem and knocked out some of the accumulated nicotine upon a paper. Then I cut an apple into four pieces, and into each piece inserted one-fourth of the nicotine-juice shaken from the pipe-stem. The old man's curiosity was at once roused to a high pitch as to what I meant to do with the inoculated apple. I then told him that, if he prized his health and life more than four rabbits, I intended to give a piece to each of the four animals and then, if they were not all dead in the morning, I should attempt treating him, with his vice of smoking undisturbed. If, though, on the other hand, they were dead, he must positively quit the pipe if he hoped to be cured. And he swore that, if but one of those rabbits was dead, he never would touch the pipe again. All four of them were dead in less than an hour. I gave this man no other medicine than a nerve stimulant and some granules of strychnine arsenate and two months later he wrote me that he was fat and in better health than he had ever known since he was a boy.

Another owner of a big plantation, a league from my office, called me to attend his wife. He was a man of powerful frame, but lean and pallid. He asked whether I could tell him how to get back his health. He was smoking a cigar a foot long. I told him he would never get well while he was addicted to that vice, and which would not delay long in killing him. Then I told him about the cattle-man. He informed me that he had smoked an average of sixteen such cigars every day. When I said to him that he would get well without taking medicine if he would stop his vice, he promptly flung the cigar in his mouth away and vowed he would never touch another. That was eleven years ago. He has been a robust, healthy man for now more than ten years. I have to my credit several other similar cures, and there would be many more if so many of these victims would not relapse, while most of whom, probably, never even try to stop smoking.

The Curse of Drunkenness

I rarely ever try to cure drunkards, and do not recall having benefited more than ten during all my professional life. I remember one whom I tried very hard to save

—more for the consolation of his meritorious family than on his own worthless account. But all my efforts and solicitude were in vain. The hapless family took all the available money and mortgaged the home, in order to complete the sum necessary to send him away to a gold-cure institution, and he came back apparently reformed; in fact, he remained respectable for a number of months. Sad to say, by and by he relapsed and soon was as besotted and even more reckless than ever before, and on the day when the mortgage was foreclosed and the family was leaving the home, this forlorn creature was dancing in a nearby saloon.

Then there was the son of the wealthiest man in the district, whose palatial home was in a fine city, spent three hundred days of the year in jail, under sentences of thirty days; his father finally having become disgusted with paying his fine or bailing him to liberty. At the expiration of each sentence, the fellow would make straight for the nearest saloon the moment he was released. At that time, caricature coming into vogue, the father hired the ablest artist in the country to come and follow his son, day and night, from the moment he came from prison till he reached the most ridiculous limit he was likely to attain, and there seize and fix the situation upon the film. By and by it came to pass that about the middle of the night, in a mist of fog, the drunken sot lurched up against a lamppost and began to vomit, when a dog suddenly appeared and appeased his hunger with the overflow. Thereupon the stuporous man began to soliloquize: "I know I ate lobster-salad at Marco's—I ate beefsteak at Lara's—I drank milk-punch at Victor's—but, where in the devil did I eat that dog!" The dutiful shadow pressed the button. The reproduction of the scene was made life-sized and framed. Then the father rented wall-space in every saloon and hung there one of these pictures, so disposed that it would be seen the first thing upon one's entering the door.

The latest prison-term having expired, the first saloon encountered was entered by the victim of booze. Walking forward, he paused abruptly in front of the apparition, then, muttering, "That looks like me," he retraced his steps. He tried another saloon, and another, and yet more, and everywhere there confronted him that frightful scene of his debased self, until at last, he fled, in

horror, through back alleys and streets, to the rear of his home.

Once in his elegantly furnished room, he rang for a servant-boy and ordered him to conduct a barber in from the rear. When, in time, the dinner-bell rang, he appeared at the table, cleanly dressed and in his right mind. This man is now the owner of his late father's estate, one of the best citizens and most-respected men in the community. I had neither part nor lot in futile attempts to cure the young man nor in the invention of the strategy that saved him.

The Wonderful Tale of the Triplets

Another time, I was forced to flee the rebels to a garrisoned place of some importance, and upon my arrival I at once notified the authorities that my services were free for the poor and wretched during my temporary sojourn there. I did not open for general practice, but I had some marked successes with my pauper clients, and this resulted in some of the better-class people to supplicate my attention, albeit there was in the town a superfluity of doctors—everyone, in fact, having a family physician, while some rich families even sported a team of doctors, since the place was very sickly and the fever-season at the zenith.

There was there a woman, past middle age, who had been consumptive for twenty-five years. She was prodigiously swollen and latterly in distracting pain, and it seemed that she was at the point of bursting. This I was told of when called to her side. Before that, however, the authorities and the priest had held a meeting of doctors late in the afternoon, and the

decision arrived at was, that this woman never could pass the night; whereupon an envious brother in Aesculap, suggested, as the meeting was breaking up, that I be called to attend her so that (Oh, human nature!) she might die in my hands. Sure enough, a policeman was sent to request me to visit and care for that moribund woman.

I arrived at the squalid hut, the family innocently ignorant of the medical council of the afternoon, as well as of what had occurred; but, I saw at a glance that the case was an urgent and pressing one. I was utterly unaware of the woman having consumption and also dropsy. Going to work, I went energetically under the belt, and quickly there felt a little foot dangling. I did the needful in a trice. However, I was surprised that the pain seemed to increase, but not for long, for, burst into this worldly existence another, and yet another little squalling stranger. In very fact, there were three of them ere sufficient neighbors could be called in to take care of them. Before long, the priest arrived and sent out notices, and soon some of the wealthiest women of the place began to arrive in their carriages. There never before had been such a sensation in the city, in connection with childbirth, and this poverty-stricken woman and her triplets soon were buried in luxuries; wealthy women took the little ones to bring up, while the mother was placed in comfortable quarters. All three babes were alive two months afterward, since which time I have had no tidings of them.

[To be continued.]

Lest We Forget Our Part

"They say, who have come back from 'over there,' that at night the troubled earth between the lines is carpeted with pain. They say that Death rides whistling in every wind, and that the very mists are charged with awful torment. They say that of all things spent and squandered there young human life is held least dear. It is not the pleasantest prospect for those of us who yet can feel upon our lips the pressure of our mothers' good-bye kiss . . . but, please God, our love of life is not so prized as love of right.

—Citizen Soldier No. 258—the District, National Draft Army.

What Others are Doing

THE MEDICINAL TREATMENT OF LOBAR PNEUMONIA

In *The Medical Record* for February 9, Dr. H. Rabinowitsch insists—against the claims of many physicians who use only indifferent medication, leaving the whole therapeutic work to be accomplished by fresh air—that in lobar pneumonia appropriate drug-treatment is of great and at times even of equal value and should not be neglected. He offers some definite suggestions, which will bear reproducing, for the reason that they constitute sound active treatment of a condition that is amenable to it. We quote:

"The use of expectorants in pneumonia, which is ignored by many physicians, has proven in my experience to be of very great importance. Not long ago, a colleague, in a conversation, asked me whether or not I used expectorants in pneumonia, and when I answered emphatically "Yes" he seemed to be somewhat surprised. But, here the physician has to show his skill in selecting the drug.

"The selection of the expectorant depends wholly upon the pathological conditions at the given moment; it is, therefore, important that the physician should recognize the exact condition of the patient and the stage of the disease. When we consider, for instance, that in the second stage (red hepatization) the affected part of the lung is consolidated, firm, and solid, it is clear that, on inspection, there will be a marked deficiency of respiratory movement, on percussion, dullness, and, on auscultation, bronchial breathing. In this most important and decisive stage, it is clear that a powerful solvent is imperative. The 'mistura solvens' (ammonium chloride, and licorice, of each, gm. 0.3; water, gm. 15.0; taken every two hours) has rendered me excellent services. Camphor internally, at the same time, gives very good results. I prescribe it in combination with benzoic acid and powdered digitalis, and I am told that ten to fifteen minutes after the patient took the

medicine he expectorated a 'lot of big thick pieces' of sputum, after which he felt more comfortable and the breathing was more quiet—a condition not to be underestimated, as it is more liable to prevent 'gray hepatization' and the formation of abscesses, and will sooner terminate in 'resolution' and absorption.

In this stage (resolution and absorption), it is clear that an absorbent and an expectorant will be of great value. I give potassium iodide in combination with anisated solution of ammonia, and have always been satisfied with the results. Strychnine should be given through the whole second stage and part of the third stage. Some advise giving creosote as an antiseptic, but, I prefer guaiacol carbonate in combination with strychnine. Alcohol is also very useful, especially in those accustomed to its use in excess. In congestion and delirium due to alcoholism or in involvement of the upper lobes, venesection has proved to me lifesaving, relieving the right ventricle."

DOES PURGATION IN APPENDICITIS MEAN PERFORATION?

In *The Memphis Medical Monthly* for November last, Dr. Thaddeus E. Wilkerson declares that for the past ten years the pendulum has been swinging in the direction of surgical treatment for the relief of acute appendicitis, until at the present time the consensus is, that procrastination should not be thought of, but, that surgical intervention should be resorted to as early as possible. Granting this to be true, Doctor Wilkerson declares, however, that there, still, intervenes a period between the onset of the attack and an operation, in which often the postoperative result is decided. For, it is during this period that the family physician too frequently converts a merely acutely inflamed appendix into an appendix that is perforated, thus giving rise to peritonitis and its sequels.

Doctor Wilkerson justly points out that a serious acute appendicitis always increases

or decreases in proportion to the treatment instituted during the first few days or hours of the attack. He even puts the responsibility upon the family physician, who, as he declares, has the first opportunity to determine what eventually the results will be, and "he either handles the case safely, by bringing into play his 'masterly inactivity', or he feels that he is called upon to assist nature by giving full doses of purgatives."

This mode of treatment Doctor Wilkerson condemns without qualification, and we can not but sympathize with him when we consider that in the cases cited by him in support of his condemnation the patients were dosed with "calomel, 1 grain every hour for ten doses, to be followed by magnesium sulphate, 1 ounce every two hours for six doses"; or, with "4 grains of calomel and 4 ounces of magnesium sulphate in divided doses"; or, with "liver-regulator, 1 ounce, calomel, 6 grains, magnesium sulphate, 1 1-2 ounces, rhubarb, 4 ounces". Truly, this sort of heroic treatment is bound to influence most unfavorably any case of intestinal upset, even if there is present no acute localized inflammation of the appendical region.

Doctor Wilkerson concludes that in any case of appendicitis the only "treatment" by the family physician is, "Hands off"; that nothing shall be given by the mouth; while an ice-cap may be placed over the appendix region and the rectum may be emptied by means of a small simple enema. He strongly insists that in any acute appendicitis purgation means perforation and that "nature's assistant", the purgative, should pass into oblivion.

As for ourselves, we may add that we are not accustomed to seeing such deplorable results as Doctor Wilkerson describes as the result of the administration of calomel followed by laxative salines or castor-oil, for the reason that we long have been convinced that calomel should be given only in minute doses, but, frequently repeated, with the total quantity not to exceed 1 or at most 2 grains within twenty-four hours. According to the age of the patient, the individual doses of calomel are best placed at 1-20 or 1-10 of a grain, and this small dose, while fully active therapeutically, does not exert a sledgehammer action, as do the old-fashioned 4- or 5-grain or larger doses.

We are well aware that southern physicians smile broadly at the idea of giving

calomel in amounts of 1-10 grain, to a total of 1 grain, claiming that such a pica-yune quantity would not begin to touch their southern patients; still, we are not persuaded of the correctness of their position and believe that a faithful clinical trial would convince them of the superiority of careful calomel-medication as we advocate it.

It is true that in cases of acute appendicitis recourse to the knife is the accepted, and probably the best treatment. However, it happens frequently enough that operation is refused or, also, that it is impossible to establish a diagnosis for two or three days. In such circumstances, evacuation of the bowel by means of *suitable* doses of calomel can not be considered as wrong; in fact, it is best, in our opinion, followed by some bland oil, preferably liquid paraffin, rather than resorting to magnesium sulphate or castor-oil. After all, an empty cecum, when the appendix is inflamed, is preferable to one loaded with foul feces; and, if the clearing-out can be procured in a gentle manner the results are favorable—not despite, but, because of the treatment. This at least has been the experience of the present writer.

CHLORAZENE FOR STERILIZING WATER FOR DRINKING PURPOSES

In looking over the January number of *The Military Surgeon*, we find an excellent abstract of a paper by R. L. Mackenzie Wallis, of the Royal Army Medical Corps, which appeared in *The Indian Journal of Medical Research* for April, 1917. In this paper, the author gives a report of some experiments with the use of chlorazene (para-toluene-sodium-sulphochloramine) as a reagent for sterilizing drinking-water. He found that when this chemical was used it always was necessary to add carbon dioxide, in order to obtain the maximum effect of this substance as a water sterilizer. He sums up the results of his observations in the following conclusions:

1. The aromatic compounds of chlorine are powerful germicidal agents when added, in small quantities, to drinking-water.
2. Experiments with chlorazene indicate that 0.04 Gram will completely sterilize 1 liter of any water in ten hours, even when 10,000 organisms per cubic centimeter are present.
3. The water so treated is entirely de-

void of any unpleasant taste and it has been found that it will remain sterile for at least four days.

4. There is evidence to show that its activity is markedly increased by the presence of organic matter in solution in the water; in fact, organic matter is essential for the compound to exert its action as a disinfectant.

5. Chlorazene possesses many advantages over bleaching powder as a chemical reagent for sterilizing water; more particularly in its definite and unalterable composition, its stability in solution, non-toxicity, absence of corrosive action, and nonproduction of an unpleasant taste in the water so treated.

6. All the results tend to demonstrate that in certain of the chloramines we have the ideal reagent for sterilizing water on a large scale.

The writer of this abstract would call renewed attention to the fact that Dakin, quite recently, has introduced another substance for the sterilization of drinking-water, which is even more effective than chlorazene, namely, para-sulphondichloraminobenzoic acid, to which he has given the name halazone; as several times pointed out in these pages. Halazone is an acid substance, while chlorazene is very slightly alkaline. The organisms found in water, mainly of the colon group, are more easily killed in an acid medium. However, when halazone is not obtainable, the same results may be secured with chlorazene, but, with maximum effect, only, if the water is acidulated. The addition of a little tartaric acid or lemon-juice will produce the same results as the carbon dioxide suggested by Wallis.

THE DIAGNOSIS OF GASTROPTOSIS AND PTOSIS OF THE TRANS- VERSE COLON

The diagnosis of disease can not always be made from leading symptoms, for the reason that symptoms very often do not suggest localization of the diseased area. Many times patients consult a physician, complaining of vague symptoms somewhat like the following: pain in the epigastrium after eating, a dragging sensation in the abdomen, and some backache. Usually the patient is nervous and discontented, complaining a good deal of weakness and

tired feeling, and of constipation; in short, he, or she, is neurasthenic.

In *The Journal-Lancet* for February, Dr. Oscar Daignault points out that all of the symptoms enumerated very likely are due to absorption from accumulated material in the transverse colon and that this organ in many cases will, in all probability, be found in a state of ptosis. The author is convinced that ptosis of the stomach and transverse colon can exist without the other abdominal organs being involved and that this is to be kept in mind in establishing a correct diagnosis.

Clinical experience has shown that, as a rule, these patients are more or less emaciated, the abdominal muscles are flabby, and the peritoneal fat has mostly disappeared, this causing a relaxation of the internal abdominal supports, or ligaments.

On examining the stomach contents of these patients, hypoacidity usually is found to be present. There is not much regurgitation of gases after meals, despite our suspicion of fermentation. Altogether, the prevalent symptoms can, in no wise, be called leading, in the sense of calling the attention of the physician to the digestive organs as the seat of disease.

It is important to determine the presence or absence of ptosis of stomach and transverse colon, and this is demonstrated best by means of the fluoroscope or a radiogram following the ingestion of barium sulphate. The former will indicate the position and also the motility of the stomach, while in twenty-four hours the barium sulphate will have arrived in the transverse colon, the position of which can then be ascertained.

THE TREATMENT OF GASTRO- ENTEROPTOSIS

Concerning the treatment of gastroptosis and enteroptosis, the latter affecting the transverse colon, Doctor Daignault, to whose interesting paper reference is made in the preceding abstract, suggests a regimen that undoubtedly is excellent where it can be followed; but, unfortunately, many times this is impossible, the circumstances of the patient necessitating certain modifications. Still, we will quote the author's statement, as it promises exceedingly good results. He writes:

"The patients should be put to bed, with the foot of the bed elevated, so that the

organs have a chance to get into their normal position. They should never be allowed to sit up while under treatment, except to be raised a little at meal-time, as the prime object of this treatment is, to build up these patients, so that the muscles, ligaments, and fats are replaced. Overfeeding should be the main treatment. The patients, after a few days, take easily six feedings a day, consisting of three good meals and three lunches. They are also given a general massage daily, to help the metabolism.

"They are given this kind of a treatment for a period of six to eight weeks or until we have raised their weight from 20 to 25 pounds. No medicine is given, excepting a general tonic. This is the only treatment, in my opinion, that will give these patients any benefit. After they get up, they may be fitted with a corset or band, to help the abdominal muscles."

In concluding, the author says: "I think that, if we study these cases better and try to make a proper diagnosis, we shall be able to help another class of patients that have been classified heretofore as neurasthenics."

PSYCHOTHERAPY IN THE TREATMENT OF MORPHINISM

It is always considered good therapeutics to remedy, so far as possible, the damage done by any disease. In morphinism, this damage is far more extensive than often is appreciated, and the mere fact that the craving of the addict for the drug has been abolished offers no guarantee of a final and lasting cure.

C. B. Pearson, writing in *The Interstate Medical Journal* for January, points out that the psychic damage wrought by opium, while not perhaps so tangible as a dislocated hip-joint, nevertheless is every whit as real, more deplorable, and more difficult to remedy. Since among the most prominent mental symptoms of morphine-addiction are secretiveness and cowardice, it, naturally, is as necessary for the physician to overcome these psychic traits of his patients as it is to eradicate the craving for the drug and to remedy the physical damages.

Both of the psychic traits mentioned are the result of self-depreciation, which Doctor Pearson calls the keynote of the psychology of morphinism. The addict is secretive, because he imagines that the

others have as poor an opinion of himself as has he. He lacks self-confidence and, therefore, courage. By way of illustration, it frequently occurs that patients place themselves in the care of physicians without informing their friends, using the pretext of a business trip or a vacation, or, in the case of physicians, frequently of a post-graduate course. Yet, Doctor Pearson justly points out that the encouragement and active support given by the friends to the addicts in their fight against their affliction would be a potent factor in their ultimate recovery.

It is owing to the same psychological difficulties that failures in previous attempts render the prognosis for a given course of treatment so much less encouraging. While Pearson has scored over 90 percent of permanent cures among those addicts who had never before taken treatment, his success among those who already had failed several times is less than 50 percent of lasting cures.

The solution of the problem lies in the persistent improvement of the psyche of the addict. It is necessary to restore his self-confidence and his courage, and to overcome his pessimistic fear of failure. In institutions, it is vitally necessary to counteract the pernicious influence of "crapehangers" among the patients in their mutual intercourse, and to eliminate everything that is prejudicial to a courageous and confident frame of mind and atmosphere.

THE PREVENTION OF BLINDNESS IN THE NEWBORN

The National Committee for the Prevention of Blindness is about to issue a new exhibit on this frequent cause of blindness. According to "The News Letter", this exhibit consists of five printed posters, the text-matter of which has been prepared by the executive officers of the Committee, with the cooperation of the Department of Surveys and Exhibits of the Russell Sage Foundation, besides splendid sketches, which amply illustrate the text, drawn by Mr. C. J. Holliday, manager of the art department of the National Child Welfare Exhibit Association.

The success which attended the publication of the Committee's last exhibit ("Industrial Eye Accidents"), in poster form, makes it seem most desirable to bring out this new exhibit in the same convenient

way. Moreover, the requests for the loan of the various prevention-of-blindness exhibits, being far more numerous than it has been possible to fill with the bulky panels heretofore in use, made it seem most advisable to produce a set that could be mailed at small cost and which it would be unnecessary to return.

Each poster is 19x27 inches in size, the set of five comprising the complete exhibit. They are printed on heavy, though flexible, paper and mailed, rolled in board tubes, thus insuring their delivery in good condition.

The posters are especially adapted for display in the observance of "health week" and "baby week" in baby contests at state, county, and local fairs and, in fact, wherever any educational public health measures of this nature are to be attempted.

"Will you not," the "News Letter" pleads, "place this information in the hands of your local health-officials—today? Write to the health-officer, also advise the chairman of the public-health committee of your club, the secretary of your fair association, and to others who might be interested now or at a later date. Your cooperation will be greatly appreciated."

The new exhibit will be mailed to any address, postpaid, on receipt of 50 cents. Special prices will be quoted for quantity lots.

A CASE OF FULL-TERM ECTOPIC GESTATION

In *The Journal of the Michigan State Medical Society* for July last, Dr. Reuben Peterson reported a very unusual case of full-term ectopic gestation, in which the products of pregnancy had been retained for eighteen years and were removed successfully.

The patient, a woman of forty-six who had been married at the age of twenty-three, entered the hospital because of an abdominal tumor that had existed for eighteen years. Five years after marriage, menstruation ceased, morning-sickness set in, the breasts enlarged, and the abdomen gradually increased in size until at the ninth month it was as large as in a woman at term. She felt life at the fifth month, does not remember, though, at what time movements ceased. She thought she was pregnant, still, never felt any labor-pains. Shortly after the nine-months' cessation of

menstruation she began to flow regularly again. However, her abdomen did not diminish in size for two years, after which it gradually became smaller. During the past year, she has not been feeling well and has lost 10 or 15 pounds.

Upon cutting through the abdominal wall, a fluctuating sac was found densely adherent to the parietal peritoneum, the omentum, and portions of the intestine. These adhesions were exceptionally dense, much more so than in ordinary inflammatory neoplasms. A normal ovary was attached to the cyst-wall and the fallopian tube could be traced over the surface of the sac—showing that it was a tubal and not an ovarian pregnancy. During the enucleation of the sac, the latter was nicked in one portion, when an oily fluid of about the consistency and color of pea-soup exuded. Considerable hemorrhage resulted from the enucleation of the sac, owing to the dense adhesions. The patient exhibited considerable shock at the completion of the operation; however, she soon rallied, followed by recovery.

The sac, when cut open, was found to contain the greater portion of a fetal skeleton: the bones, in Professor McCotter's opinion, being those of a nearly, if not quite, full-term fetus.

The main interest attaching to this case rests in the fact that the fetus was retained for eighteen years, and it is even more worthy of notice that an ectopic pregnancy, which moreover, was tubal went to almost full term without rupture occurring and without resulting in infection or other serious accident to the mother. Other cases are on record in which the sac became infected, the bones finding their way out externally through the intestines, vagina or bladder, after a longer or shorter time.

FETUS MATURED PARTLY IN AND PARTLY OUTSIDE A RUPTURED UTERUS

At a recent meeting of the New York Obstetrical Society (*Amer. Jour. Obstet.* Jan., p. 136) Dr. Asa B. Davis reported an unusual case, in a woman who had been delivered in her fourth pregnancy by cesarean operation in April, 1914, the fetus being stillborn. She had no children living. In

September, 1916, this woman was pregnant for the fifth time, being very anxious to have a living baby.

After her admission to the hospital, the fetal heart, of 130, was found to the right and above the umbilicus. Thereafter, it could be heard at times; at others, not. Fetal movements always were perceptible. The woman was in good health and spirits and assisted with the ward-work. In the midafternoon of November 23, she complained of very slight intermittent backache, so, the house-surgeon made an abdominal examination. The abdomen was pendulous, covered with a thick wall of fat; yet, he believed that he could feel a large ovarian cyst in front of the pregnant uterus.

The patient was unduly sensitive to abdominal pressure, and it was evident during examination that beginning labor was present. Preparations were at once made for delivery, a second time, by cesarean section. Upon opening the abdomen through the former high midline scar, there came into view a sac of membranes filled with clear fluid in which small parts of a fetus were seen moving about actively. The fetus was presenting by the vertex, right occipito-anterior position. The membranes were ruptured and a living male child weighing 3700 Grams was delivered by breech extraction. During delivery it was found that the head of the fetus came from the uterine cavity; the remainder of the fetus was in the sac of membranes in the abdominal cavity and outside of the womb. Not a drop of free blood was found in the abdominal cavity.

The uterus was contracted and well down in the lower part of the abdomen. It was drawn up to the abdominal opening and found wide open through the entire length of the former cesarean scar. The edges of this opening were thick and entirely covered with adherent membranes. The placenta was on the posterior and upper part of the uterine cavity somewhat to the right. There was no blood and there were no raw surfaces. All evidence pointed to the fact that this opening had existed from before conception or from very soon after and that for many months or during the entire pregnancy the ovum had developed largely outside of the uterine cavity. The membranes were not unusually thick nor tough.

It is strange that a slight fall or a misstep of the mother had not ruptured them.

The puerperium was afebrile and uneventful. Mother and child were discharged in good condition on the tenth day after delivery. The child was nursing and gaining weight. The womb was central, movable, not tender, with the fundus 14 cm. above the symphysis.

SUPERVISION OF MIDWIVES

During 1917, important changes were made in the qualifications required of applicants for licenses to practice midwifery in the state of New York.

The length of term of a midwife's license was changed so as to expire with the calendar year in which the license is issued. The supervision of midwives, including the issuing of midwives' licenses, has been transferred to the vital statistics division. A beginning was made in the carrying out of a state-wide plan for the courses of instruction for midwives in large communities by cooperation with the sanitary supervisors, local health-officers, and nurses, the detailed field work being conducted by a special nurse from the division staff.

BLOOD PRESSURE IN HEAD INJURIES

In *The New York Medical Journal* for February 9, Dr. H. M. Armitage presents the results of his studies of blood pressure in head injuries, which have led to the conclusion that the systolic pressure is of no value as a diagnostic measure in determining the degree of compression of the brain or of aiding in a decision as to the advisability of operating. His experience has demonstrated, however, that the pulse pressure is proportionately high in cases of traumatic compression of the brain, and that the more serious the compression, the higher the pulse pressure, until the last stages, when vasomotor compensation begins to fail. While the decision as to whether or not trephining should be undertaken must be reached only under a careful study of the entire group of symptoms, the author unhesitatingly asserts that of these symptoms the most important one is the frequent estimation of the pulse pressure in its relation to the pulse rate and systolic and diastolic pressures.

Miscellaneous Articles

Studies on Food Economics

XI.—Cheese

AT the present day, when the conservation of food is the slogan, it will be well to consider how we can best carry out the program inaugurated by the United States Government with regard to the meatless and wheatless days.

Without exception, cheese, from every aspect of nutrition, is more nourishing, pound for pound, than any other food in use by man. However, being a concentrated food, cheese should not be largely partaken of by persons of sedentary occupations and habits. Thus, we find, for example, taking muscular fiber without bone (that is, selected best part of the meat) that beef contains, on an average of 72 1-2 percent of water; mutton, 73 1-2; veal, 74 1-2; pork, 69 3-4; fowl, 73 3-4; while average cheese contains only 30 1-3 percent of water.

Comparing the whole carcass, we have, in cheese, 3 to 1 over flesh. Casein (or cheese), as it is voided by the animal in milk, is soluble. When taken into the stomach in this form, it is coagulated, by the gastric juice, and separated from the sugar, albumin, and butter-fat. The cheese of commerce is artificially digested by one of two processes; that is, either by means of rennet or of hydrochloric acid.

Rennet is the salted and dried fourth stomach, the so-called rennet bag, of a calf. This stomach resembles the human stomach. Casein, as voided in milk, is soluble; but, when rennet is added (whether the fat is removed or remains), the casein is coagulated and rendered insoluble.

This insoluble casein, when separated from the whey, and dried, is a yellowish hard hornlike substance, which softens and swells in water, but does not dissolve in it. Lactic acid in the stomach dissolves it as

coagulated by the hydrochloric acid that is present.

When hydrochloric acid is used to coagulate the casein outside the body, it doubtless acts also on the phosphate of calcium present; the same being removed in the further process of cheese making. Hence, cheese made by the rennet process is much to be preferred. So, also, cream-cheese, or that made from the whole milk, is more nutritious than that made from skimmed milk.

Condensed milk and what is called evaporated cream consist of skimmed milk to which has been added, as a preservative, granulated cane-sugar. It was during the year 1882, the writer thinks, when he had a lengthy correspondence with John Borden, of Walkie, New York, on the possibility of obtaining a condensed milk for infant feeding from whole milk. The correspondence ended with the confession by Mr. Borden that such milk could not be produced by evaporation. The various modifications of cow's milk are mainly in the direction of reinforcement of cow's milk by the addition of extra cream. However, this is a digression from our cheese subject. Raw cheese is not as digestible as it is when properly cooked. But, how few do realize this in our country. In Europe, they thoroughly understand the cooking of cheese, and get up very palatable dishes of it. It may be premised that acids coagulate casein, while mild alkalis render it soluble. On these premises, the following are predicated:

Raw cheese can be eaten by mountaineers or people working at hard labor, but, it is liable to give indigestion and nightmares if eaten of too freely by people of the towns or of sedentary habits.

The great lack of our refined food of the present day is, the absence of organic salts,

especially of the phosphate of calcium. Another very necessary constituent of our bodies is potassium; hence, our food should contain a sufficiency of this element. Fresh vegetables, fruits, and the juices of meat contain potassium.

There are only two forms of cooked cheese much used in this country, one of which is: Welsh rabbit (or, properly rare-bit). This too often is indigestible, although it need not be. The other is macaroni cheese, that is, cheese cooked with macaroni. The macaroni made in the United States is mainly made from a northern starchy wheat very deficient in gluten. These two are boiled together and baked, or the macaroni is first boiled, grated cheese then added, and both are baked together. Algerian or any southern wheat contains a larger proportion of gluten than our northern wheats.

The absence of potassium salts in our food is the prime cause of scurvy. Scurvy on board ship resulted, in the past, from eating salt meat the potassium salts of which escaped, by exosmosis, into the brine of the pickle. Captain Cook, in his voyage around the world, kept his crew well by the use of lime-juice, citrate of potassium.

W. Mathew Williams has the following:

"I once lived for six days on bread and cheese, only, tasting no other food. I was in company of C. M. Clayton (son of the senator of Delaware, who negotiated the Clayton-Bulwer treaty), taking a passage from Malta to Athens in a little schooner, and, expecting a three days' journey, we took no other rations than a lump of Cheshire cheese and a supply of bread. Bad weather doubled the length of the journey. We both were young and proud of our hardihood in bearing privations, were staunch disciples of Diogenes; but, on the last day, we succumbed and bartered the remainder of our bread and cheese for some horse-beans and cabbage-broth of the fore-castle. The cheese, highly relished at first, had become positively nauseous, and our craving for the fore-castle vegetable broth was absurd, considering the full view we had of its constituents and the dirtiness of its cooks. I attribute this to the lack of potash-salts in the cheese and bread."

The writer has often remarked how, in our Florida woods, the range-cattle eat the

bones of such of their number as die there. They do this, to obtain a sufficiency of calcium of which the average sandy soils are sadly deficient.

Now as to a method of rendering average insoluble cheese soluble, reinforcing it with the potassium it lacks. When bicarbonate of potassium is added to cooking cheese, it renders it more soluble and more easy of digestion, the proper proportions being 1-4 of an ounce of bicarbonate of potassium to each pound of cheese. Again we quote from W. Mathew Williams:

"My first acquaintance with the rational cookery of cheese was in the autumn of 1842, when I dined with the monks of St. Bernard. Being the only guest, I was the first to be supplied with soup, and then came a dish of grated cheese. Being young and bashful, I was ashamed to display my ignorance by asking what I was to do with the cheese, but, made a bold dash, nevertheless, and sprinkled some of it in my soup. I then learned my guess was quite correct."

Now, if we have the desire to economize in feeding—especially as to meats, we can do so by the freer use of cheese in our domestic economy. For example, if we boil rutabagas (yellow turnips), the resulting liquid, if reinforced with grated cheese, will be found a very palatable, wholesome, and nourishing dish. Another cheap, wholesome, and extremely nourishing dish is, oatmeal porridge reinforced by grated cheese. Oatmeal is cheaper than either corn or wheat, while, considering its feeding-value, it is three times as cheap as flesh. Rice, hominy, tapioca, and other starchy foods can be improved by the addition of grated cheese. The latter are heat-producing and fattening foods, while cheese is nitrogenous and contains the mineral elements necessary to our makeup.

Many dishes may occur to the practical cook that can be made up from scraps that otherwise would be relegated to the swill-pail, by re-cooking with grated cheese reinforced with bicarbonate of potassium. Another dish to which the attention of the reader should be called is a mush made by stewing diced pumpkin or squash with a very little water, mashing in its own liquid while hot, then adding grated cheese. This is very palatable.

None of these cheese dishes should have

meat as an accompaniment, for, that would make a too concentrated diet.

Now for a plan or way of preparing a welsh rarebit. To a given quantity of grated cheese, add about its own bulk of water in which the proper proportion of bicarbonate of sodium as give above, is added, and cook in a suitable vessel. Then pour on toasted bread or mix with browned bread crumbs and bake. Part of the water may be replaced by milk, if desired. Also, when eggs are plentiful and cheap, the rarebit may be reinforced by such. However, they are not considered necessary.

In the making of meat-soup, a smaller proportion of meat may be made to produce a much larger proportion of soup by adding grated cheese.

A. T. CUZNER.

Gilmore, Fla.

ADIEU OF AN OLD FRIEND. A VALEDICTORY

Twenty-one years ago, I subscribed for your journal, under the name of THE ALKALOIDAL CLINIC and every month since then it has regularly come to me and every copy has been read and studied. How much valuable and useful information its pages have brought me, no words of mine can tell. I have appreciated, admired it and recommended it to young and old. Now I have reached a time when I feel that I must part with this valued friend, not that I love it less or feel that its value is decreasing; for, I can see it becoming more and more valuable, interesting, and essential. But, the infirmities of old age as well as other reasons force me to take this step.

The saying goodbye and asking you not to send THE CLINIC next year, is hard to do—for twenty-one years, it has been a pleasure to me to say the reverse. I wish you all the success in the world, enlarged growth and usefulness. It has been a wonderful work that you have done. How many millions of lives there have been helped and blessed by this wonderful magazine! I have been looking over the old numbers, those of that year 1897, and how good and useful and helpful the journal was then, and how much better now.

"May your bow abide in strength" and may those who take the place of the great ones who have made CLINICAL MEDICINE

become as wise and helpful and hopeful as the fathers were. Better things are coming to this poor world than it has ever had. This is our hope and our encouragement. I am glad and thankful to have had this great privilege of having had the reading of CLINICAL MEDICINE for all these years.

PAUL F. BROWN.

Estill, S. C.

[In ancient Sparta, the young men were the learners, the grown men the doers, and the old men the advisers. The latter occupied as important a position in the economic arrangement of the state as did the virile men, themselves. So it has been ever since and so it should be. While we appreciate the desire of the old, who have passed many years in constant succor to the afflicted, to rest, and while we wish a happy evening of life to our old friends who, like Doctor Brown, bid us farewell, yet, we are loth to part with them. We need you, for the wise counsel that you can give, for the encouragement and the kindly approval; we want your good wishes and your sympathy and your commendation. Besides, we always are sorry to see a physician, though retired, give up his active interest in those who are carrying on his work. There are so many things in which he can maintain it, so many occasions in which his experienced counsel may be of inestimable value to the younger physicians.

True, there may be reasons that make it impossible to continue, say, the subscription of the journal. And, yet, it seems as though this factor would tend to keep alive the enthusiasm and the interest, even if it must be passive. However, the decision rests with everybody personally, and however much we regret the necessity of parting, we bid Doctor Brown a cordial "God be with you," hoping that the evening of his life may be spent in peaceful and happy surroundings.—ED.]

THE TREATMENT OF ADENOIDS

I read, with much interest, the article on adenoids, by Dr. C. W. Canan, in the January Clinic, page 61, also that of Dr. H. J. Achard on page 63. My comments shall be brief.

I agree with Doctor Achard that the nonsurgical treatment is the rational one, and the following remarks on the etiology

should suffice to prove the case, or, rather, sustain our position.

Adenoids are a growth of lymphoid tissue situated at the vault of the pharynx, obstructing the nasal passage to the wind-pipe. They are caused by neglecting the infant's nose, which becomes obstructed from taking cold, the infant then breathing through its mouth. There being no use for that portion of the air-passage, nature fills that space with a vegetation or lymphoid growth—adenoids.

This being so, almost every case of adenoids could have been avoided by proper care of the infant's and child's nostrils. If the nostrils are kept clean (open) from the time of birth, there will be no mouth-breathing and, consequently, no adenoids.

Allow me to say that I think that the statement that a child has been found which had adenoids before it was born does not seem rational. It can only be something similar if any such or similar growths have been found in a dead fetus.

I have treated cases in persons of every age, and I seldom advise surgical removals. I wish to encourage local applications both for adenoids and for hypertrophic tonsils.

Heal and absorb the adenoids and reduce the hypertrophy of the tonsils; cleanse the nose and furnish the patient with proper medication to apply or spray the nose; teach him to breathe through the nose; and the adenoids will soon be absorbed.

One of the first instructions mothers should receive from the obstetrician is, how to manage the infant's nose—how to keep it open—tell her that, when the child's nose becomes clogged, it will breathe through the mouth and, so, become a mouthbreather and that the result will be adenoids. Assure her that adenoids are due to mouthbreathing and that only mouthbreathers will be troubled with adenoids.

None of the babies under my care have adenoids, so far as I have been able to discover. That is almost conclusive evidence that mouthbreathing is the cause of adenoids.

R. WILLMAN.

St. Joseph, Mo.

[It all amounts to this, that, as in so many other conditions, the best treatment of adenoids is, to prevent them. For this purpose, the excellent antiseptic action of chlorazene and of dichloramine-T should

not be lost sight of. When adenoids actually have formed, the treatment, whether medicinal or surgical, will depend upon existing conditions.—ED.]

SODIUM CACODYLATE IN EXOPHTHALMIC GOITER.

In my communication printed in the January issue, page 79, I briefly mentioned the good results I have had from sodium cacodylate in exophthalmic goiter. In compliance with a request from the Editor, I will go a little more into detail, premising that, in view of the characteristic symptoms presented, there is no question as to the correctness of the diagnosis. It may be added that the first one of the two cases treated by me with the cacodylate occurred a long time ago, while my second one, in which quinine also was used, is of very recent date.

The first case is that of a woman living in Worcester, Massachusetts, a native of Germany, who, one year preceding, became the mother of a healthy girl, but, did not nurse her. At the time I was called, she complained of general weakness and tremors. The thyroid gland was moderately enlarged; the tachycardia, the tremor, and her general muscular weakness suggested Basedow's disease; which diagnosis was confirmed by Doctor Accone, of Boston, who was called in consultation. We agreed on arsenical treatment; the best preparation, in our opinion, being sodium cacodylate. After a course of twenty-five daily intravenous injections, she was cured. I say cured, and not, relieved, because all the symptoms were gone except the enlarged gland. However, after a rest of several days, she was given another series of the same injections. Absolutely no other medicines were administered.

The second case, that of a woman of Los Banos, California, 40 years old, is still more characteristic. Two years ago, I delivered her, with forceps of her second child. Last year, I was called to her and found her complaining of general tremor, especially of the legs, and general weakness. The tremor was so violent that it was impossible for her to stay on her feet even a short time. There was but little doubt about the diagnosis. She was very like the picture of exophthalmic goiter we used to read in the medical books—the thyroid gland enlarged, the marked protrusion

of the eyeballs. Besides the tremor, there was a very frequent pulse, palpitation on every little exertion, and Graefe's sign. Moreover, owing to vomiting and diarrhea, she was reduced to skin and bones. This, I think, is a complex of symptoms that does not leave any doubt as to the diagnosis, even if I do not relate all the history.

After two weeks' treatment, this woman was able to leave the bed with the tremor rapidly leaving her and all the other trouble diminishing. She received only twenty-five injections of sodium cacodylate, because her financial standing did not permit further expense; still, it was enough to free her from the disease and to make it feasible to continue the treatment with Fowler's solution of arsenic. It was here that, because of the severity of the condition, quinine in small doses, four times a day, was prescribed.

The comment of the Editor on my previous article induces me to say that in almost all diseases, especially where disturbances of the intestinal canal are present, after a preliminary cleaning-out I keep my patients on a milk diet for a few days, with the intention of eliminating, if possible, any toxins lingering.

Not long ago, patient No. 2 brought to my office another sick woman, and so I had the chance to see her again. The same picture—the thyroid gland enlarged, protrusion of the eyeballs, and Graefe's sign—was present, but, she said she feels good and strong and was doing all her family work. No tremor at all was present and the pulse was regular.

RAFFAELE MORETT.

Los Banos, Calif.

GOOD BOOKS—FREE

Our book department has on hand books occupying space that is needed otherwise. So, it has been decided to give them away, the only condition being that twenty-five cents is sent for every volume desired, in payment of postage. Address the Book Department of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, Ravenswood, Chicago, Illinois.

These books are as follows: "Every Boy's Book", "Every Girl's Book", and the "Physician Detective", all by George I. Butler; and "Stories of a Country Doctor", by W. P. King. Also "The Houseboat Book", by William F. Waugh, and

"American Alkalometry: A Digest of Clinical Teachings", edited by Doctors Abbott and Waugh, of which four volumes were published.

OLDTIME EMERGENCY SURGERY.

After reading Doctor Wright's article in February CLINICAL MEDICINE, page 154, it put me in mind of the way I was treated about fifty years ago, also how I treated a certain patient at about the same time, when I was teaching school.

One cold Saturday morning in January, I was getting the team ready to haul fodder for the stock for the next week. In some way, both horses and I got mixed up in the barn-door at the same time, and they got me up against the side of the door and fractured my clavicle, rendering me unconscious for a short time. As soon as possible, my father saddled one of the horses and went three miles after a doctor. The first thing that doctor did was, to order mother to bring the broom—and I wondered what on earth he was going to do with that broom. Said he, "Here boy, take hold of this broom-handle." Then he pulled out of his pocket a spring-lance and "whacked" it into my arm. When he had bled about a pint, he tied a pillow-case around my arm, keeping the hand up pretty well, and that was all. My fracture healed up after about three months.

Then as to the other case. While teaching school, I was boarding with my sister. One evening just as I arrived home, my sister said: "Hurry, quick, John Crosby has cut his foot off and they want you to go over." "Well," I said, "I am no doctor," but, I went. I found that the man had cut the big toe almost off, just leaving about half of the muscles on the toe next to the other one. The bone was cut off. It was ten miles to a doctor and the folks were poor, so, I thought, Here goes.

I washed the blood off with cold water; also cleaned up the foot better than it had been for a long time, I am sure. Then with a needle and thread I put several stitches; and, you can bet, I had a hard time working that needle through that tough skin. It healed up nicely without my assistance, for, I did not see the fellow again until the wound was completely healed.

This was before I ever thought of "reading medicine." The toe grew on just as

MISCELLANEOUS ARTICLES

well and as quickly as if it had been done in one of our up to date hospitals of today.

T. R. NASON.

Columbus, Ohio.

WHY HE HESITATES TO WRITE

I am in receipt of your request to write articles for CLINICAL MEDICINE. However, before promising anything of the kind, I should like to whisper a word in your ear—for publication.

When I write anything for publication, I have learned, from past experience, to make it so plain that "he who runs may read" and understand, too. The short article I wrote for your February issue I consider one of the plainest I ever wrote, yet, since its publication, I have literally been "snowed under" with letters. They come from every part of the country—from the cities, the small towns, the rural districts, and they still are coming in in every mail.

Now, doctor, maybe you think I ought to feel complimented—and I do, in a way; but, it is all devilish expensive, because only three letters out of all that mass *had stamps enclosed* for a reply.

During the year 1895, I wrote an article for the old ALKALOIDAL CLINIC every month and received almost as many inquiries from them, which shows that the great popularity of the journal is not on the wane.

The articles I expect to write for CLINICAL MEDICINE will *not* be for reputation or emolument, but, for the good of the cause. If the answer to any inquiry is not worth return postage, better not waste time to write it.

C. S. NEISWANGER.

Chicago, Ill.

[We can well understand Doctor Neiswanger's plaint. Indeed, we know that many physicians writing for medical journals have much cause for the same kick. It isn't as though writers who have communicated the results of their investigations for the benefit of physicians were not perfectly willing to amplify their remarks or give special information in reply to specific questions, but, it is the unfairness of the fact that so many men fail to enclose return postage when they expect a letter of information and instruction. A stamp or two doesn't amount to much, but, a hundred or two hundred means from three to six

dollars, not to speak of the time required for writing. It is not deliberate sponging, but, merely thoughtlessness that gives occasion to letters like the foregoing. Moreover, when a thing is self-evident or when it can be cleared up by a little thinking, why put anybody to the necessity of writing a letter about it? It may be all right for you, doctor, to write a letter to the author asking certain questions about his article. Still, in most instances, the answer will occur to you while you are putting your thoughts on paper. And then there is no need to mail that letter. Of course, if you actually have an important question to ask, there is nobody but will be glad to answer in detail. But, let us impress this thought, and strongly:

Whenever you want a letter of instruction or information, enclose a postage stamp.

It is only right.—ED.]

DOCTOR RICHARDSON PROTESTS AGAINST PATERNALISM

In my copy of the journal for February, on page 155, I find my short article in protest against undue legislative regulation, and also, on page 106, your editorial comment upon the same. To the latter, I wish to add a few remarks.

Further argument or discussion, so far as the JOURNAL or its readers are concerned, is, obviously, superfluous. However, much more could be said on the subject, and that from my side of the question, pointing out much that seems to be in error in your comment.

True, things are going in the direction you point, but is it on critical analysis, actually best? Not apparent best, but, real best? Are we not fighting today against one of the most highly developed outcomes of what we ourselves are on the threshold of, and in what you so thoroughly seem to concur in your editorial comment?

Is not, and has not, Germany for some time been a highly organized community, in which individualism is almost absolutely destroyed? What a hellish thing she is proving to be. Such methods beget a certain type of advanced efficiency, but, does it make for the best in the end; in the long run; either for the individual or the community collectively?

Apparently it throws a barrier around the possible future production of great in-

dividuals, those with the personality and initiative which permeates men like Thomas A. Edison.

Is not this progress and community betterment more apparent than real?

Is it not better for a community to attain a certain moderate standard of ambidexterity, or versatility, than a higher, one-sided, specialized individual development? Would it not be better so to formulate our educational system, constantly to increase this collective standard, than to split the community into a number of smaller specialized units as our present educational systems are tending to do?

Am I not right in the inference to be drawn from my former article, that, as a collective organization, we are degenerating rather than progressing; admitting that there is specialized progress in small units? Collectively, we are not what we should be nor what we should strive to be. We have it in us to train to the point of becoming highly multiplex. Why should it not be fostered?

Personally, I should hate to be as helpless as some people whom I know are, who couldn't drive a nail straight or saw a board to a line, and, yet, with equal facility turn around and in five minutes determine the presence of gonococci under the microscope.

F. N. RICHARDSON.

Cleveland, Ohio.

OUR SON

Who can guess our pride and joy,
As we hold our baby boy,
Tiny infant, knows no one,
Our blessed infant son.

May God bless us, every one,
Most of all our baby son.

Time goes on, he grows in grace,
Knowing look lights up his face,
Smiling, cooing, kicks his feet—
My, he's smart! And, oh, so sweet!

May God bless us, every one,
Most of all our baby son.

Time goes on—it makes me sad:
Little son is now a lad.
Goes to school, and then to play—
Leaves our home now every day.

May God bless us, every one,
Most of all our boy, our son.

Time goes on, he's called by life,
Called to toil, and daily strife

Makes him noble, great, and strong:
A full-fledged man in the busy throng.

May God bless us, every one,
Most of all our sturdy son.

Time goes on, grim war calls son
From our loving arms he's gone.
For the right he'll bravely stand,
Son is now a soldier man.

May God bless us, every one,
Most of all our soldier son.



The Soldier-Son of Dr. C. W. Hunt. Do you wonder at it, that the Father is proud of him?

Soldier true, our pride, our joy—
Son is still our infant boy—
Still our babe, his country's man,
For the right he'll bravely stand.

May God bless us, every one,
Most of all our own dear son.
C. W. HUNT.

Brevard, N. C.

TREATMENT OF BURNS, ALSO OF BEDSORES

Parresine is an excellent dressing for burns of every degree. I have used it in three cases of severe burns and am well pleased with the results. After applying.

the patient immediately exclaims, that feels good. It removes pain and hastens the healing process.

G. SCHLEGEL.

New York, N. Y.

[In the treatment of burns, for which liquid-paraffin preparations were elaborated originally, the possibilities of this new class of preparations are, by no means, exhausted. We remember succeeding in relieving promptly the pain and distress of bedsores in the case of a very old man who was dying of inanition. Curative treatment was hopeless; the sole aim was, to relieve pain, and this was attained. There are many other ways of using parresine and similar preparations, and, these may be discovered by setting your imagination to work.—Ed.]

DEATH OF DR. ODOS A. HOPKINS, M. R. C.

We print a likeness of Dr. O. A. Hopkins, late of Cleveland, Ohio, and for many



The late Dr. O. A. Hopkins, M. R. C.

years a valued member of THE CLINIC "family", who died last January, of spinal meningitis, at Camp Beauregard, Louisiana. Doctor Hopkins was a graduate of the Kentucky School of Medicine, at Louisville, and had done postgraduate work at Cincinnati Medical College and at Vienna.

Austria, returning home from the latter city just before the outbreak of the big war. Having been successful in surgery, he enlisted in the medical reserve corps and received his training in Fort Riley, Kansas, after which he was sent to Camp Beauregard, with the rank of Captain. Doctor Hopkins leaves a wife and son and daughter, to whom we extend our sympathy.

BUCKWHEAT-HONEY FOR DIABETICS

I have recently been particularly interested, among other things, in the medicinal treatment of diabetics and, to be sure, in the most important treatment, the dietary regimen. I will mention the case of a patient whom I cared for and his great longing for something sweet. I considered the use of honey, and concluded to give that a trial and watch the urine closely. There is a division of opinion as to the influence of honey in diabetics and we thought the experiment worth while. The patient, I may add, is a very intelligent subject and has learned to test the urine, and it is interesting to note the many things that he observed.

Thus, he found that the buckwheat-honey has no untoward effect, while honey from bees that live among flowers or grain-fields (other than buckwheat) has the same influence as have other sugars. Sugar in the urine always is dependent on the amount ingested, and there always is a relation between intake and output. This probably is worthy of note, as the interdiction of sugars to the diabetics is a real deprivation in the majority of victims. Too, the patient in question has observed that worry about business matters has a bad influence, so, also, great physical fatigue. However, the question of buckwheat-honey being permissible for diabetics is a question of paramount interest, and, personally, I should be happy if investigation would be made in this direction.

ELIZABETH CAHILL.

Chicago, Ill.

[In *The Journal of the American Medical Association* for October 16, 1915, on page 1412, there is an abstract from the *Russkiy Vrach*, according to which Davidoff found honey to be a good substitute for sugar and other sweet foodstuffs in diabetes. It prevents acetonemia and dimin-

ishes the amount of sugar in the urine, despite the fact that honey contains 75 per cent of sugar. One patient used up within ten days 1 pound of honey without there occurring any increase of the sugar content in the urine. When the honey was stopped for some time and the percentage of sugar rose, the patient was given four tablespoonfuls of honey daily, and the sugar content again dropped. Instead of honey in substance, a jelly made of honey was used. Davidoff here reports 6 further instances of the beneficial action of honey in diabetes.

Beyond that item, we have not been able to locate any other references to the matter, although we have an impression having read other remarks about it. The use of honey would seem to constitute less of a strain on the assimilative powers of the diabetic than does cane-sugar, and this is worth remembering. We should like to have the idea put into practice, and hope that physicians who have had experience in this matter will report to us.—Ed.]

OBVIATING MASTOIDITIS

In twenty years, I have not failed to prevent pus formation and an operation by placing over the mastoid process a fly-blister as large as a silver dollar and allowing it to remain about two hours or until a blister forms. At the same time I saturate the patient with calcium sulphide, by giving 1-2 grain hourly. I also order a purgative of epsom salts. Try it.

X. Y. Z.

EXPERIENCES WITH CAPSICUM, POTASSIUM BITARTRATE AND TEREBENE

With regard to your request for experiences with capsicum in the treatment of delirium tremens (February, p. 156), I make free to suggest that you reproduce a paper that was published some years ago, in *The Cleveland Medical Journal*, a copy of which I submit. It is as follows:

Capsicum, as a heart stimulant, has, in my practice, proved a very valuable remedy in alcoholism and for habitués of opium and its derivatives. I first learned of its value during my service for eleven years as physician to the Cleveland Workhouse. Capsicum was the only remedy given to the prisoners who unfortunately were suf-

fering from mania a potu or from the excessive use of opiates. Even when apparently moribund at the time of entering, capsicum always proved beneficial. There were no deaths from such causes. It was given in beef-broths and other soups and in coffee, tea or milk, made as strong as the patient could swallow the liquid without suffering too much discomfort, and was given freely every two or three hours until improvement followed, then less frequently.

Several years ago, I was called in consultation with the late Dr. H. W. Curtiss, of Chagrin Falls. The patient, the wife of a well-to-do farmer, had symptoms of a very severe type, quite similar to those of patients having cholera morbus or sporadic cholera. Her condition was very critical—vomiting and purging, the rice-water discharges, blueness of the skin, glassy and fixed eyes, and the cold sweat, the precursor of approaching death. The usual cholera-remedies, such as arsenicum, camphor, veratrum, and others had failed. Finally, capsicum in appreciable doses was given, and the patient recovered.

In a very interesting case, an habitué of morphine, a society woman, had been accustomed for years to take hypodermic injections every three hours, a full syringe-full of Magendie's solution. (Magendie's solution is composed of 16 grains of morphine in an ounce of water.) Capsicum bridged over the tremendous struggle and alleviated the tortures that always accompany efforts to be freed from the torments of this fascinating and alluring drug, so well described by De Quincey in "The Confessions of an Opium Eater." Her face, from the drug, became blotchy and pinched, her complexion yellow; but, in time, after being cured, the complexion became normal and her health was restored.

My experience with potassium bitartrate (cream of tartar) has been very satisfactory where the volume of urine has been lower than normal. In a patient, where the volume for twenty-four hours was less than eight ounces, after taking the preparation for four days, the volume increased to 40 ounces. Many patients have enjoyed this drink during their convalescence. It is healthful and a good substitute for lemonade or phosphates. This may be sweetened if so desired.

For chronic bronchitis a good remedy is terebene, even when the expectoration

is purulent. The dose is 2 or 3 grains or less of the pure liquid, in capsules, three times a day or less frequently. I have found it more beneficial than *rumex crispus* or balsam of Peru when these were indicated. I am a friend to terebene for bronchial catarrhs.

H. F. BIGGAR.

Cleveland, Ohio.

A WORD TO BEGINNERS, BY ONE OF THEM

I have been in the practice of medicine for ten years and as I am about to pass out of the beginner's class I thought I would give a lecture for those just entering the practice with no experience to guide them. I have no idea of burdening you with a long dissertation. I shall be brief and to the point, in fact, too brief.

About Locations.—In looking for a location, shun the one "without competition". It is a place not worth your time and trouble. The people will not have much confidence in an "out of the way" place; besides, the automobile has materially shortened the distance to the larger towns.

Furthermore, you need the spur of competition to stimulate you to further study and endeavor.

Prepare for Minor Surgery.—Before embarking upon the practice of medicine, you should, by all means, prepare to do minor surgery. Nothing detracts from your reputation so much as to refer small operations to another doctor, even though he be a surgeon. You should be prepared to amputate a finger, perform a curettage, remove a foreign body from the eye, do an intubation, relieve a distended bladder due to a strictured urethra. I have failed to do all these in my early days. Have confidence in yourself. You can remove a cyst, lance an abscess or tie a blood-vessel. A man with self-confidence will succeed where a brother more learned will fail for lack of that vitalizing virtue—and such it is.

Anent Consultations.—When in serious difficulty, do not turn to consultations. The majority of your nearby doctors will violate your confidence. Such has been my experience. Besides, whether the patient lives or dies, you lose, while the consultant gains. If the patient recovers, you get very little credit, and, if he dies, you receive more than your proper amount of blame—if

there is any room for any blame. Often the room or cause for blame is thought to exist, whether it does or not. Rather go to your books and study your case in the quiet sanctity of your own home or office. There you will, ten to one, receive better advice, and you will not jeopard your reputation, therefore. The laity will think more of you if you do not seem to need consultation. Patients do not die as easily or as often, for a beginner, as you might imagine. They get well very much oftener than they die. As I look back over my ten years of practice, I view my requests for consultation as the most foolish and unprofitable things I did.

Keep Up to Date.—Do not be stingy in the matter of new books and magazines. Subscribe for a few medical journals. Buy some practical new books each year. Do not be afraid to use new remedies. Six years ago, I began to use bacterins, and that gave me such an advantage over my competitors that they had to take it up in self-defense. Those who did not are going "by the board."

Dispense Your Remedies.—For a beginner, there is nothing that would help you get practice more readily than dispensing your own remedies. It is not a difficult task, at all. It is easy, thanks to our pharmaceutical houses. You will have more office-work and you will make more money. You might as well refill your own prescriptions as for a pharmacist to do it. There is not a class of men more responsible for their own failures than are the doctors. No business man runs his business with less business-sense than the doctors do. They do the hard work, go out night and day, in all sorts of weather, shoulder all sorts of responsibilities and go through all sorts of experience—on credit. No wonder the doctors die poor. They deserve to. This is a business world and those who do not adapt themselves to its requirements will take the last place. The law of natural selection is no respecter of persons, not even of the doctors.

Treat the Chronic Sufferers.—Patients with chronic ailments are pretty generally neglected by the profession, except that portion known as quacks and charlatans. Most physicians can materially increase their income by ministering to such, to give relief, even without effecting a cure. Indeed, relief is all many of them look for. And it is all office-practice, this chronic

practice; no night drives, no gasoline, no automobile, no expense—and, moreover, it is cash.

Besides, if you are a beginner and have plenty of spare time, you can put that time to good advantage studying those cases. A work that is helpful in this line of work is one that treats of symptoms. I personally make as much money from office-practice (mostly chronics) as I do from general practice, and probably more. I must have averaged about \$800.00 a month cash for the past year, and this in a town of 500 souls in western Oklahoma—really a land of drouth. I neither advertise nor do any major surgery. To have a chronic sufferer come from a distance of 50 to 200 miles to consult with me, is a very common experience. I am now on the verge of starting a sanitarium for tuberculous patients. I did not choose this specialty, but, it is forced upon me. And, with what small library I have on tuberculosis, I am able to do as much for these unfortunates as any man in the matter of rest, fresh air, wholesome food, water-baths, sun-baths, and tuberculin.

In dealing with these chronic patients, I usually charge them a good fee for the whole treatment (often \$100.00) plus the cost of medicines used. You may, if you wish, charge so much a month. There is nothing unethical about that so long as you do not guarantee cures. A surgeon charges a lump sum for an operation. You may similarly charge for a course of treatment. Your services are worth as much as the surgeon's in many, many cases.

Hints on Chronic Therapy.—The large army of chronic sufferers testify to the ignorance of the profession in the matter of treating these patients. This ignorance is a source of profit to the quack and charlatan. My experience has been that a large portion of these patients, perhaps half of them or even more, suffer from focal infection. The seat of 75 percent of the cases of focal infection is above the diaphragm—in the gums, tonsils, accessory sinuses, and so on, in the remaining 25 percent, it is in the lower part of the anatomy—fallopian tubes, prostate gland, genito-urinary tract, and so on. Do not be misled by the learned diagnosis of other doctors, but, look for focal infection. I have cured patients labeled with "consumption", "diabetes", "cancer", "Bright's disease", "dyspepsia", "gallstones", "heart trouble",

and every other scary name by curing their pyorrhea or removing their tonsils.

Very many of these chronics have chronic appendicitis, colonic stasis, gall-bladder disease, stomach-ulcer, pus-tubes, pulmonary tuberculosis, rheumatism, sciatica, piles, dysentery, or other infection.

Give them relief. Patients do not care very much for diagnosis. Theory doesn't interest them. They demand practical relief. On numerous occasions, you will find a hypodermic injection of morphine to be a very potent agent in satisfying your patients and in enhancing your reputation. A patient suffering from dysmenorrhea, pleuritic pain, intestinal renal or hepatic colic, incessant severe cough or pain from any cause is your good friend if you will just slip a hypo beneath the skin.

Be independent, but, courteous. Be independent, but, courteous, especially to the female sex. Courtesy is a tremendous factor toward success. A very courteous medical tyro will succeed where a more learned confrère will fail for lack of "gush". The most popular doctor I have ever known was one who liked the kids and kept them up in chewing-gum and who had a pleasant smile for every woman and a hearty handshake for every man. However, be independent. Never give advice unless asked for it. It will not be appreciated. Human nature is such, and it does not pay to act the reformer.

In conclusion, I would admonish you to use your common sense. Do not be the last to take up a new idea nor the first to put it into practice. The practice of medicine depends for success upon the same principles that govern success in other trades and professions. There is no short cut nor secret road to success. It requires hard work, constant application, and fair dealing.

By all means, let whisky and women alone. If you must indulge, then go to a large city on a spree and do not return till you feel you can fast for, say, three months again before taking another debauch. Be very careful of your general appearance. Be neat and clean and do not dress as if money were a very scarce article with you.

Do not depend upon lodges and other social connections for practice, for, you will be disappointed should you expect much. Your own work or lack of it will be the determining factor in your success

or failure—other things being equal.

Refuse to countenance the giving of abortifacients. Those whom you accommodate will, in their own hearts, think less of you for it. It does not pay, even from a financial standpoint, to say nothing about the moral or ethical side.

Be merciful to the poor. Treat them with courtesy and deference, to which they are entitled the same as anyone else. If you are too small to do that, better for you to refuse to treat them at all. Success in life is not altogether or even largely a question of accumulation.

There are a great many other things I might mention, but, it is not necessary for me to do so. Your own judgment will come to your rescue. For two years, I have been wanting to write this short article, but, I have never felt competent: and, yet, there was always a sense or a feeling of having shirked a duty for not doing it. Now I feel better for having unloaded myself, and, if the result is not what it should be, please, overlook it, as I am a country doctor and make no literary or other claims beyond my immediate sphere of action.

M. SHADID.

Carter, Okla.

INCORPORATION OF THE NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS

We are informed, in "The News Letter" for February, that, on October 2, pursuant to a notice which had been sent more than thirty days previously, a quorum of members of the National Committee for the Prevention of Blindness met at headquarters, 130 East Twenty-second Street, New York City, and proceeded to take the necessary steps for the incorporation of the Committee. Application was made to the state department at Albany for a certificate of incorporation, which has been issued.

For the first three years of its life, the National Committee held the legal status of a voluntary association. The value of its work having been shown and its usefulness demonstrated, the future of the Committee is assured of greater permanency through its incorporation. With the Committee's growth in membership and in responsibility for leadership in the movement for conservation of vision, there comes demand for

larger resources to carry on its work, and now it is expected that large sums of money will be intrusted to its directors by bequests for the continuance of its beneficent service. Contributions may be sent to the address given above.

WHY "MAYO BROTHERS"?

May I not (to adopt that curious locution of President Wilson's) draw the attention of the medical profession of America—with a hope of opening their eyes—to the undignified and erroneous figure of speech that has fastened itself upon our people with regard to "the Mayo Brothers of Rochester, Minn."?

Why "Mayo Brothers"? Don't you see—every blessed one of you readers—the point, put before your eyes in this blunt way? The Brown Bros., gents' furnishings; the McCurdle Bros., horseshoers; the Anderson Bros., importers of herrings; [and, more pretentious] the Rockefeller Brothers, dealers in coal mines; the Mayo Brothers, cold-storage of appendixes and ovaries.

For heaven's sake; for the sake of your honored profession; for the sake of your alma mater and your alphabetic appendixes; for the sake of your self-respect; gentlemen, will you not resolve to put it in its decent, proper form:

the brothers Mayo, of Rochester, Minnesota.

Of course, if you have in mind an industrial copartnership, you will continue to write:

Mayo Brothers, Sawbones (Incorporated).

One can overlook such vulgarity in the unconsidered lingo of the street, but, it does not seem befitting in members of a learned profession.

ADOLF G. VOGELER.

Chicago, Ill.

FROM EARTHQUAKE-DESTROYED GUATEMALA.

We have been and still are passing through terrible times down here: On the 25th of December, the capital city of our country was destroyed by terrific earthquakes, and I was called down there to help. It was awful. Ruins everywhere, water-mains burst, and the water flowing in the middle of the streets, and women

were washing their dirty rags in this water while others gathered the same water for cooking-purposes; dead animals strewn around were covered with buzzards, who were doing their utmost to render the carcasses innocuous. The rich reduced to extreme poverty, with scarcely the sufficient clothing necessary to cover them, and many of the poor improving the opportunity to steal from the ruined homes. Everybody living in improvised tents, made from curtains, pieces of carpets, boards, and so forth; the city in darkness, and the earthquakes shaking down pieces of wall, bricks, and so forth, on those who were obliged to pass along the choked streets, killing numbers.

The night of the 3d of January, while I was sound asleep in a room, worn out from excessive work, there was a tremendous shock at 11 o'clock, throwing me from bed and almost grinding to powder the room where I was staying; fortunately the roof did not fall. These shakes continue with increasing severity, accompanied by terrible subterranean noises, the earth rising and falling, and the movements almost of hurricane velocity. The earth in many places has been opened in large fissures and at times gaseous smoke issues from these crevices.

Many other towns also have been destroyed, and half of the inhabitants of the republic are living in tents, shacks, and so forth, being afraid that their houses will fall.

As soon as possible, active work was begun in the ruined city, restoring hygienic conditions, cleaning up the ruins, and vaccinating everybody against smallpox and typhoid fever, this being made obligatory by government order.

The general cemetery and the old cholera-victim cemetery were so badly ruined, bones and dead bodies being piled up everywhere, that it was necessary to incinerate the whole thing.

We are in the midst of a severe smallpox epidemic and are, therefore, very busy. I use, with success, a mixture of pilocarpine nitrate, defervescent compound, and calcium sulphide, which I have found to be specific in its effect.

The president of the Republic has taken upon himself the distribution of food, clothing, and so forth, to the people, and has been working day and night. In this, as in many other ways, he has attracted

the hearts of all to himself and shown his great nobility of character.

American marines, from the cruiser *Cincinnati*, reached the ruined city with medicines and supplies, especially vaccines which were thankfully received. The American Red Cross and the Rockefeller Foundation, represented by Dr. A. M. Struse, in Guatemala City, have furnished large supplies of vaccines and medicines and established hospital tents, as well as doing many other necessary things.

The American government and people have proven their friendship for this country, and without their help there would be fearful conditions, which we could not adequately meet. Tents and wooden houses by the thousands have also been sent from the United States. This has been a practical lesson to all and praises of the Americans are in everybody's mouth.

There are signs of volcanic activity, also, and we do not know how this will all end. Many people have died from shock, and some are temporarily unbalanced mentally.

CARLOS F. SECORD.

Chichicastenango, Guatemala, C. A.

[Who is not reminded, in these strenuous and terrible days, of the Scriptures, Matth. 24,6 and following: "And ye shall hear of wars and rumors of wars; see that ye be not troubled; for, all these things must come to pass; but, the end is not yet.

"For, nation shall rise against nation and kingdom against kingdom; and there shall be famines, and pestilences, and earthquakes in diverse places. . . .

"For, then shall be great tribulation, such as was not since the beginning of the world to this time, no, nor ever shall be."

Truly, we live in serious times and it behooves us all to aid, to the fullest of our power, those of our brothers who are in greater stress than are we ourselves. Doctor Secord will be grateful, in behalf of his afflicted charges, for any help that can be extended to him. Letters may be addressed to him direct or, we shall be glad to transmit any contributions that may be sent to us for the purpose.—ED.]

VOMITING OF PREGNANCY

Your editorial entitled "Vomiting of Pregnancy" wins a renewal. Enclosed find check for \$2.00. And the "morning vomit-

ing that assailed the husband" was the climax that cinched the winning.

During my last year at Tulane, my roommate and bed-fellow decided he needed a calomel-purge. Over my protest, he took several grains on retiring. Result: that I had to crawl out next morning before it was time. It had no effect on him. And the dampfool to this day doesn't understand it. "There are stranger things, Horatio, than were ever dreamed of in your philosophy."

OLIVER O'BAR.

St. Louis, Mo.

[We can stand for "vomiting of pregnancy"—in the husband; but, getting a calomel effect by proxy—we pass.—ED.]

WHERE SHALL I HANG MY HAT?

One tree can not produce all the apples needed to supply the world; neither can one magazine carry good articles to all the readers in the country. Not exactly wishing to be guilty of plagiarism, I give *The American Magazine* credit for the nucleus of what I am about to say.

It all hinges on an excellent article in that magazine about the brothers Mayo, of Rochester, Minnesota, their clinic, and the organization they have built up about themselves in that little out-of-the-way Middle-West town. It tells how those two famous men were raised, went to school, studied medicine, and came right back home to practice.

The editor of the magazine admonishes us, right at the beginning of the article, thus: "Your postoffice address is the least important thing in this world to you." And, judging from appearances, he is right.

Where do you hang your hat? New York? Chicago? St. Louis? San Francisco?—Good!

John D. Rockefeller hung his hat in Cleveland when it was little more than a village, and you all know the rest.

William McKinley hung his hat in a modest home in the little inland town of Canton, Ohio, and he became President.

Elbert Hubbard hung his in the little "two by four" town of East Aurora, New York, established a printery, with some side shows attached, called his outfit the Roycrofters—and he made good.

Wilbur and Orville Wright hung their hats in Dayton, Ohio, solved the problem

of aerial flight, and became world-renowned.

And so one might go on, finding many others comparing well with the aforementioned, and including the two Rochester surgeons.

Many young men will be starting their life's journey this spring, freshly equipped with a college-degree and a diploma.

They will all be asking themselves, "Where shall I hang my hat?"

Don't let this worry you; keep right on hanging your hat where you are, or, if you must change, just hang it any old place. Follow the example of the Mayos, the Rockefellers, and the rest, and become successful. It, surely, is as the editor of *The American Magazine* says, your postoffice address has nothing to do with it.

F. N. RICHARDSON.

Cleveland, Ohio.

[Here is a splendid opportunity for a long editorial. Only, we are not going to write it, for fear of spoiling the effect of Doctor Richardson's wonderful little preachment. To the young men—and the older ones, too—we will just say: "Go to it, and stick to it.—ED.]

THE HARRISON ANTINARCOTIC LAW AND THE DOCTOR

Just a few words from one of your CLINICAL MEDICINE "family," which you invite, on Dr. H. Sampson's view as to amending it and "piling up unproductive labor." It is true that the law is quite cumbersome enough. The doctor is bamboozled at both ends of it. The legal fist on one end and pestering, cunning, sly—true and pseudo patients on the other. He is between the devil and the deep sea: twixt Scylla and Charybdis. The honest doctor should be so situated in this regard that he will have clear sailing and easy swing. This can not be unless all concerned act in good faith, with altruistic ethics. And, as contemplated in the law, mean business. I mean business a-goin' and a-comin'. But—honest business.

The doctor should not be stultified, intimidated, nor enslaved to layman dogma. This latter may not say: you doctors must have your license, be numbered, and pay your tax for it, and then you may dispense morphine and other narcotics in your practice; and then turn around and say, "But,

you shall not use more than about a dram a month, as that is about all the average doctor in average practice ordinarily will use, without throwing yourself open to suspicion, surveillance, and prosecution. Who's the Doctor? The layman or the physician? Let us concede that the aim of these two is identical—control.

In the humble opinion of the writer, Dr. H. Sampson and the amendment are absolutely right. But, they do not minutely go far enough to control. Addicts come in and demand treatment of the doctor, as, within the law, a true addict has a right to do. As much a right as a woman enceinte and falling in labor has a legal right to do. Of course, a doctor with equal legal right may decline either case.

The doctor should make an immediate written record of the addict's application, being particular to get the true name, residence, location. Also, facts as to any other time of treatment, by a doctor or institutional.

Here is a compact of agreement: "Entering treatment in good faith for a cure. Will use no morphine or other drug except that supplied as agreed with the doctor. Will not give away nor sell any. Will be truthful in reports and other data the doctor may choose to stipulate. This to be signed by the patient.

These names to be sent in by the doctors all over the State to the proper central legal office, together with the amounts of morphine or other drug their each patient is using. These names, residences, amounts of drug, and names of physicians whose patients they are should be alphabetically listed often enough, but, not less than once a month to every physician in the state. Then, when an addict comes in, the doctor will look at the list and know immediately whose patient it is and amount and kind of drug used by him. Then he can talk from facts. He will have the cinch and the whip.

It is the only way he may know instantly as to these strangers, many, perhaps most of them, pseudo. The applicant could be forced back to his own doctor from whom he is trying to escape to "pull the leg" of another. Or he held up in treatment by these two acting legally in conjunction, and, if giving a false name or other obliquity, be turned over for proper care or punishment. Probably punishment—and without any maudlin sentimentality about addicts' irresponsibility and, hence, immunity. If

floating about and found to be not acting in good faith with any doctor, be compelled to go to a state institution for proper treatment.

This is a candid, wide-open, and above-board policy, but, it is the aim and right and righteous aim of the State. The states are their people. And the State has a right to know its every molecule or, if you please, every ion. Control is refuted without it.

H. L. GREEN.

Quincy, Ill.

"WHAT SHOULD THE DOCTOR DO?"

Permit me a word with reference to the subject under the above title on page 154 of the February CLINIC. The doctor, by all that is right, honorable, and holy, should do his duty, should tell all of the facts. His conscience had told him what to do before he asked the question; this is why he asked it in the first place.

In the name of honor, duty, and truth, he should do all in his power to protect his own race from contamination with an inferior race.

The old Negro grandfather acted on this principle, when he informed the Doctor of the facts.

Yes, I am a Southerner, but, I wish to say here that this is not an argument on the "race question", that we, in the South, do not have a feeling of "race prejudice" toward the Negro; but, we do have a feeling of race superiority. Therefore, do not accuse me of race prejudice when I repeat that the doctor should protect his, the white, race from contamination with the Negro, an inferior race.

Let the Doctor, and each reader, take it to himself. If his daughter were about to marry this young Negro, believing him to be all white, would not he, and each one of you parents, tell his daughter? Yes, a thousand times, yes. Then let the Doctor do to all of, and for all of, the daughters of the white race what he would do for his own daughter.

By silence—a criminal silence—would he allow his daughter or any other white man's daughter to marry this young Negro and become the mother of children showing the flat nose, thick lip, and kinky hair of the Negro. No, a thousand times, no. So let the Doctor treat his brother white-man's daughter as he would treat his own. Let him get another letter from the old Negro

and keep it as a proof, and then let him tell it, so far as possible, to all of the white race.

C. W. HUNT.

Brevard, N. C.

THE BANNER BETSY MADE*

BY THOS. C. HARBAUGH

*We have nicknamed it "Old Glory"
As it floats upon the breeze,
Rich in legend, song and story
On the land and on the seas;
Far above the shining river,
Over mountain, gorge and glade,
With a fame that lives forever
Floats the banner Betsy made.*

*Once it went from her—its maker,
To the glory of the wars,
Once the modest little Quaker
Defly studded it with stars;
And her fingers swiftly flying
Through the sunshine and the shade
Welded colors bright, undying,
In the banner Betsy made.*

*When at last her needle rested
And her cherished task was done,
Went the banner, love-invested,
To the camps of Washington;
And the glorious Continentals—
In the morning light arrayed,
Stood in ragged regimentals
'Neath the banner Betsy made.*

*How they cheered it and its maker,
They, the gallant sons of Mars;
How they blessed the little Quaker
And her flag of stripes and stars.
'Neath its folds, the foeman scorning,
Glinted bayonet and blade,
And the breezes of the morning
Kissed the banner Betsy made.*

*A protector all have found it,
And beneath it stands no slave;
Freeman brave have died around it
On the land and on the wave;
In the foremost front of battle,
Borne by heroes unafraid,
'Mid the cannon's loud death rattle
Soared the banner Betsy made.*

*Years have passed, but still in glory
With a pride we love to see,
Laureled with a Nation's story,
Waves the emblem of the free;
From the rugged pines of Northland
To the deepening Everglade*

*The first American flag was made by Mrs. Betsy Ross, a Quaker lady of Philadelphia.

*In the sunny heart of Southland
Floats the banner Betsy made.
Now she sleeps, whose fingers flying
With a heart to Freedom true,
Mingled colors bright, undying,
Fashioned stars on field of blue;
It will lack for no defender
When the foreign foes invade,
For our Nation rose to splendor
'Neath the banner Betsy made.*

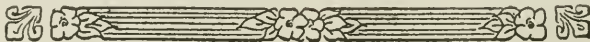
WE ARE HUMAN

I must tell you that I read *THE CLINIC* from cover to cover, and, while fully enjoying it, I also profit by it, not alone intellectually, but, financially as well. I like your journal, because you are human and seem to *speak* to me, not merely about medicine, but, touch upon other things quite as necessary and as useful to me, as a general practitioner. Keep a-sending it, and don't dare let me miss it at any time. Good luck to you and may your tribe ever increase!

WILLIAM CRAPPLE.

Chicago, Ill.

[That is just what we want to be—human. We, that is, the "family", are not physicians, alone; we are also men and women, citizens, members of families; in short, we are human and by no means superior or inferior to human feeling, sensations, desires. So, a *practical* medical journal, one that aims to be a real friend of the doctor, that wants to get under his skin, as the saying goes, has to extend its influence beyond the merely professional phase of the doctor's life. It must touch upon his personal life, upon his inner and deeper thoughts and aspirations. Some of the purely "human" discussions that have appeared in these pages have, we truly believe, helped much to make some of us better men and women and, therefore, better doctors. Only, we don't want to be teachers in a restricted sense. We don't want to be little tin gods on little pedestals. We want to be just fellowmen, talking *with* you rather than *to* you or *at* you. So, you must "come back." *You* must do *some* of the talking. On medical subjects, first of all. But, other topics of general interest are not barred. Let us hear from you.—Ed.]



In the World War

FROM CAMP TRAVIS, TEXAS

After four months of service as surgeon in the National Army, I see myself all changed. My actions, methods, temper, and very thoughts make me a new man. Physically, I am ten years younger than was the recruit of last October that formed the foundation upon which to build me. With 25 pounds more of muscle now than then, I have power and endurance surprising to myself. When I came here, I saw things the world never saw before and which probably it will never be necessary for us to see again. At first, I "rubbered" at the situation, at times, I felt stupefied as if in a dream. As the days went rapidly by, this feeling of "where am I and what am I doing?" was dispelled. There were no doubts nor dreams. I had been torn from civil life and thrust into the largest military center and "soldier-factories" in America at an extraordinary time, soon to be rebuilt. Then I found myself launched into the whirlpool of business activity. I had become part of the big war-machine. No longer the trample of five thousand soldiers (not unlike the muffled exhaust of a powerful engine) on the hard pike-roads of Camp Travis would cause me even to "drop a stitch" or turn my head. No longer does the whirr of nine or a dozen air-machines, a mile or so over my head, cause more curiosity than did the sweet breeze at home, rustling among the shrubbery. Why? I am amalgamated with and a part of it all.

We are going to win, and I will try to tell you why I think it. Our minds are not on democracy, liberty or bondage. Neither on life and death. We are at *work*—that's all. Intensely occupied! Our material is flexible, pliable, malleable, ductile, temperable, and everything else needful for making real soldiers, and that in the least possible time. Our machine works like magic. In the course of one year, the United States will have the biggest, the best, the best-paid, and the most efficient army

that ever has existed and probably will ever be in the world again. This army will conquer the world for liberty. Liberty will be complete. If not, the price we are paying is too dear.

I will relate an extreme case, illustrating how soldiers are made at this big "factory." It reminds me of the "butterfly" story so well known to all kindergarten-teachers and their pupils. One Adam Thomas, nearly a fullblood Indian, came to us in a drafted bunch from Oklahoma. Poor Adam! A physical giant, but a mighty poor fighting man! As he saw it (hoping and praying that he was right), the Government had made a mistake in drafting him, and he had, assuredly, missed his calling. During the first ten days, he was sick, from the crown of his head to the end of the great toe, with everything, from epilepsy and insanity to fractured ribs and rheumatism. He was willing to have "just any old thing," but, was not a first-class malingerer. When his mind would run back to little squaw number one or to some of his other choice damsels, he would give way to the most violent sobbings of grief.

By and by, though, as our Adam got acquainted with the boys and his new life and business, he began to gain ground. Three weeks later, while on inspection duty, I entered the barracks where he stayed. The first man to jump to his feet and yell "Attention" was Adam. There he stood as stiff as a post. His face was glowing with joy. Today, he is a first class soldier, except when he gets too "fresh" and has to do extra "K-P" for a week. (K-P stands for kitchen-police and means that they have to wait on the table and clean up). This is great punishment for minor offences and with some of the boys this is just one degree less than being shot at sunrise.

We quickly learn to accomplish things that once seemed impossible. How many doctors who read this have ever tried to examine one thousand men for the detection of gonorrhea and "crabs" in three hours' time? You will have to inspect one



At Camp Travis. Cleaning-up Time.

about every ten seconds! The first time you try it, you will not give efficient service. This army is inspected twice each month for genitourinary diseases, and any man in the service who contracts gonorrhea or syphilis without having used a prophylactic according to regulations, and without leaving a prophylaxis-record to show (on Form 77), is subject to court-martial. This serves two purposes: it protects the government against paying a worthless man (for, they usually stop his pay) and also places the offender's name before his associates as being unclean.

This infirmary (which is a field hospital) serves four battalions (4,000 men). During the month of January, we had 31 "Form 77s" filled out. This appears to me like a good record for 4,000 men who are in walking distance of a city that the government inspector has pronounced "extraordinary" for vice. Of these 31 men, one man's name appeared five times. If the men who took it in turns at the rate of one man per day, each one would enjoy the luxury (?) of one intercourse in fifteen days less time than once in ten years. How do your high standards of civil life compare with that! This army is a camp of gentlemen. If not gentlemen when they come, the habit is soon acquired.

When we get an allotment of new men, they are subjected to a careful examination,

without fear or favor. If beyond repair, they are rejected. If accepted, then we go to work. The dentist removes all useless teeth, the mouth is cleaned, and kept clean. And so on down to the last toe on his feet. He is trimmed up and polished, and forced to remain polished. Our men don't want to mix with new recruits until they have had several baths. Their knowledge was gained from actual experience, and they know that these men are tainted. They don't want to eat or sleep close to them until these newlings have learnt their lessons.

I want to tell the sweethearts that are left behind by these boys, if any girl is so fortunate as to have strings on one of them, to cling to him with "cake and candy" and things, for, he is worth your while, your waiting, your prayers, your love. Your love not only will be returned to you a patriotic gentleman, but, a physical, mental, and moral giant. The slacker who now looks you in the eye will not then be in his class. Do not think the young man that you have dared to love will lose his chastity here. This army contains approximately 80 percent less genitourinary diseases than does the same number of young men in civil life; and these are rapidly being eliminated.

We have something like 200 kitchens, each to feed (at full strength) 250 men.

There is not a pan or tool in use therein which would not be fit for use in the White House, at Washington. The barracks are all just as well kept, and the soldiers who stay there are clean and full of personal pride.

Should this war terminate today and the soldiers return to their homes, the money it has cost to give them this training has been well spent by the government. Our soldiers today represent the finest body of men in



In The Snow At Camp Travis, Texas.

the world. To them, every American citizen should look with pride.

Now, let's "about face" and look through the other end of the telescope. One of the greatest faults attributed to the army doctor by the nation is, to minimize our inefficiency and magnify our ability to adjust the American citizen to any sort of conditions on a moment's notice. By "looking backward" with good judgment, we only can draw on the imagination as to the fierceness and the length of the present conflict. Therefore, if the unexpected does not happen, your flag may need your services. Should such be the case and you are not patriotic or want to join the service for the purpose of making money or gaining experience, it is best that you stay where you are. We do not practice medicine here in army infirmaries, but, we conduct a big

repair-shop. You would only be a piece of the equipment. That is the only way to get anywhere.

Your skill as a bedside clinician who can accurately fit remedies to disease-expressions is practically worthless in the infirmmary. The tools furnished by the War Department are used. If the patient needs a purgative, you don't have forty kinds from which to choose to satisfy your pet ideas of correct therapeutics. The good Eclectic would begin to think of chionanthus, leptandrin, podophyllin, colocynth, and so forth. Nothing doing. Your cholagog, hydragog, pancreatic stimulant, and so on, is covered in full, by calomel, aloin, magnesium sulphate, and castor-oil. Fortunately, these drugs meet every requirement, mainly because this army is composed of physically well men, who don't need finespun differential therapeutics. Base hospitals are very well equipped.

As yet, this army is not devoid of the new officer, with shining insignia and a superabundance of authority. Pretty soon a man of this stripe sees himself as others do and gets down to a safe working-basis. The same may be said of those who come with a mild disposition—they gain poise and get to the level of usefulness.

With a very carefully guarded opinion, I believe the American nation has not started to realize the seriousness of the task now lain at its feet.

Lt. T. H. STANDLEE,
M. R. C., N. A.

San Antonio, Tex.

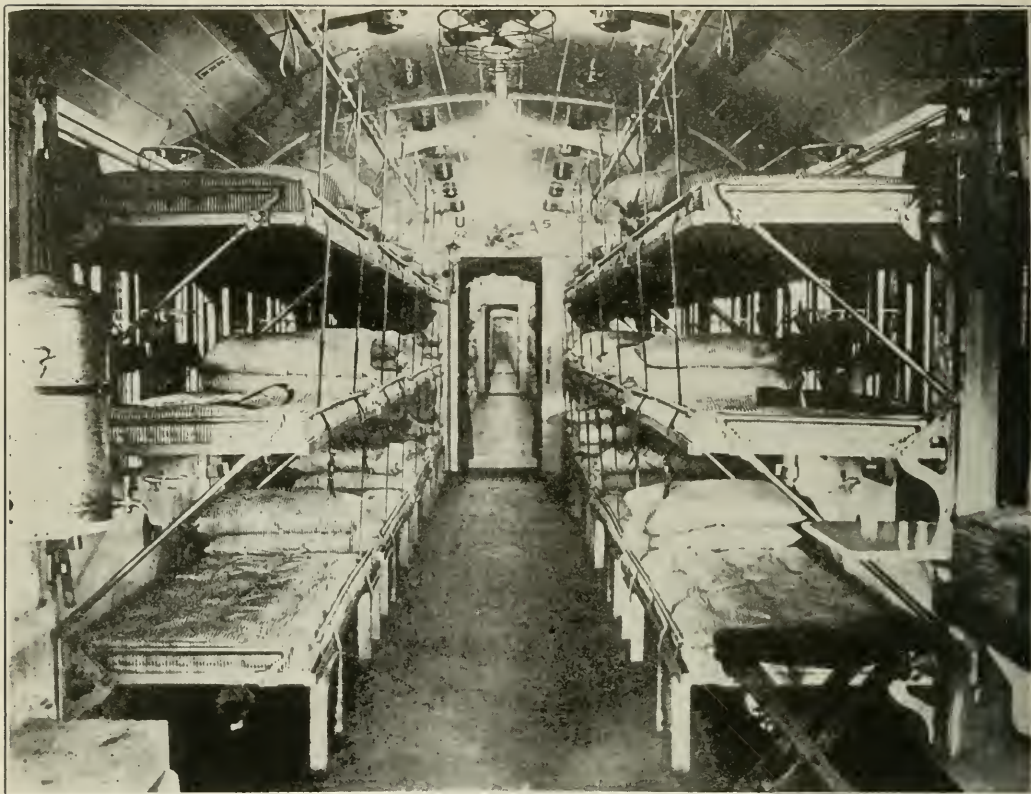
JOIN OUR OVER-SEAS FUND

Announcement was made recently that a part of the subscription receipts of THE AMERICAN JOURNAL OF CLINICAL MEDICINE for February would be applied to a fund for the relief and comfort of medical officers abroad.

This announcement stirred up some interest, but, not nearly enough, in fact, we were somewhat disappointed in the lack of response from our readers.

We have already shipped to several medical officers in France an assortment of American-made cigars, cigarettes, and pipe-tobacco. These for the doctors themselves, if they enjoy a smoke, or else for distribution to their patients, if they prefer.

We now make a further announcement of this "Over-Seas Fund", believing that



Copyright, Underwood & Underwood.

British built Ambulance Train for The American Expeditionary Force.

many of our readers may wish to send a dollar, two dollars or five and thus have a share in this work. We are not aware of any similar fund for medical officers. The names of contributors to the Fund will appear from month to month in *CLINICAL MEDICINE*, together with a report of packages sent abroad.

Contributions and suggestions will be gladly received and promptly acknowledged. "Kick in", brother.

EYE-DEFECTS AMONG DRAFTED MEN

In the December number of the *Monthly Bulletin of the New York State Department of Health*, Dr. Frank Overton, Sanitary Supervisor, gives a noteworthy article on defects among drafted men. In the second district of Suffolk County, 1,200 men were examined in seven days. Defective sight was found in 3.08 percent of those rejected, and, from general statistics, it is safe to assume that a very small percentage

knew of these defects, and it is very probably likewise true that a large proportion of these defects might have been prevented, corrected or cured had proper attention been given in time. Now is the opportunity to apply this lesson to the rising generation.

THE VOLUNTEER MEDICAL-SERVICE CORPS

The Council of National Defense recently issued the following statement:

For the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps.

It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who

are eager to serve their country in every way. Slight physical infirmities or the fact that one is beyond the age-limit, fifty-five years, or the fact that one is needed for essential public or institutional service, while precluding active work in camp or field or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs now.

It was in Philadelphia that the idea of such an organization was first put forward, Dr. William Duffield Robinson having initiated the movement resulting in the formation, last summer, of the Senior Military Medical Association, with Dr. W. W. Keen as president and 271 members.

Through the Committee on States Activities of the General Medical Board, the matter of forming a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six states and the District of Columbia. This Committee, of which Dr. Edward Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project. A smaller committee, with Dr. Edward P. Davis, of Philadelphia, as chairman, was appointed to draft conditions of membership, the General Medical Board unanimously endorsed the Committee's report, the Executive Committee—including Surgeons-General Gorgas of the Army, Braisted of the Navy, and Blue of the Public Health Service—heartily approved and passed it to the Council of National Defense for final action, and the machinery of the new body has been started by the sending of a letter to the state- and county committees, urging interest and the enrollment of eligible physicians.

It is intended that this new corps shall be an instrument able directly to meet such civil and military needs as are not already provided for. The General Medical Board holds it as axiomatic that the health of the people at home must be maintained as efficiently as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions—all these

needs must be fully met in time of war as in time of peace.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but, the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but, the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deprive the needy of attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeons-General of the Army, Navy, Public-Health Service or other duly authorized departments or associations, the general administration of the corps to be vested in a central governing board, which is to be a committee of the General Medical Board of the Council of National Defense. The state committee of the medical section constitutes the governing board in each state.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The names and data of applicants will be submitted to an Executive Committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignium.

The General Medical Board of the Council of National Defense is confident that there will be ready response from the physicians of the country. The Executive Committee of the General Medical Board comprises: Dr. Franklin Martin, chairman; Dr. F. F. Simpson, vice-chairman; Dr. William F. Snow, secretary; Surgeon-General Gorgas, U. S. A.; Surgeon-General Braisted, U. S. Navy; Surgeon-General Rupert Blue, Public Health Service; Dr. Cary T. Grayson; Dr. Charles H. Mayo; Dr. Victor C. Vaughan; Dr. William H. Welch.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from March issue, page 244.]

The trouble with the radical telepathists is, however, that they think that, because *some* diseases can be cured by pure thought, all diseases can be; not taking into consideration the fact that the stronger diseases require stronger means, and, not understanding that a medicine is as truly a concentration of thought as is their mental suggestion, and, if properly adapted to its use, a more powerful one than theirs. It certainly requires intelligence and concentration of thought to produce a right medicine. And moreover, these telepathists leave out the fact that this concentration of the physician actually enters the patient's system, while their concentration does not reach him at all. It is the patient's own thought, not any specific thought of the telepathist that works on him.

In view of all this, there is no choice but for us to believe that, while telepathy, so called, is, indeed, a power, that power is of one's own self, not of another; is received, not given; and, while it really does consist of a thought-message between two bodies, it is the recipient's thought that goes out toward the healer and returns to him. His thought of confidence, of trust, that something is being done for him by a skilful person, is the beginning of his cure, unless it be a misplaced confidence and trust. If his case needs a more strongly concentrated thought than can be accomplished without material means, that is, without medicine, medicine he must have or die.

Some telepathists base their operations on analogy. They say that, since disease can be communicated by one to another, why can not health? And there is very good reason in that view, only it should not be carried too far. It should not be carried so far as to claim that they can communicate

health to a man by projecting their thoughts into his mind without any material means, for, then the analogy does not hold good. As it requires material connection between two bodies, in order for disease to pass from the one to the other, such as bodily contact, or spittle, or a letter, or clothing, et cetera, so it must be with health, if we purpose to carry out the analogy and claim that health can be communicated at all as disease is. It was the failure to recognize this logical conclusion that gave rise to witchcraft in the older days, then, later, to Mesmerism, and still later, to hypnotism; while now, in our own time, this same failure to recognize the necessity of the material takes form as telepathy or Christian Science.

Telepathy, in the sense in which it is usually viewed, is, in short, only another form of witchcraft or mesmerism or hypnotism, has the same basis for its existence that they had, and not any stronger basis than they had. Therefore, in the sense in which telepathy is usually regarded it does not exist at all, any more than the former did.

The possibility of putting a person to sleep by pressure on certain parts of the body or by fixing his attention on a bright object, et cetera, is admitted, but, the inoculation of one's mind with a specific thought by another is impossible. We see many exhibitions of this nature, but—we also see the tricks of jugglers!

Still, there is no smoke without fire. That is an old saying, and a true one, though not enough attention is given to the fact that the fire may exist solely in the mind of the person who raises the smoke about it, and not in the other fellow's. The telepathist certainly believes he has reasons for supposing that he can cast his thought into another's mind, and this is one of them, in illustration:

Take the operation of wireless telegraphy as an analogy. Here is an instrument

¹Haliburton says: "Cheerfulness is health; its opposite, melancholy, is disease."

throwing out waves into space, and there is another instrument hundreds of miles away which receives those waves and interprets them in the terms of the sender. The telepathist says: "There is an illustration of the way in which I can send my thoughts into the mind of another. Without any material connection between these two telegraph instruments, messages pass from the one to the other; and in the same way my thought passes from me to my patient."

But, what are those waves but a material connection? The cosmic ether which forms those waves, and through which they travel, and without which they could not travel or even exist, are as truly the material means as wires are in ordinary telegraphy. They are as truly the means by which a wireless message reaches its destination as books or lectures or acts are means, or as drugs are the means by which a physician's message reaches his patient. The ether is, indeed, only another form of wire. And both the ether and the wire are, in the last analysis, concentrated or condensed thought; the ether being so slightly condensed as to be invisible, while the wire is thought so strongly concentrated as to be visible. Thought is, in both cases, as it is in the case of the telepathist, the sender of the message; and the means by which the message is transmitted is also thought; but, thought so strongly concentrated as to form something tangible, at least as tangible as ether, which stands in the physical world, the world of science, as the line of demarcation between spirit and matter.

In telepathy, it is supposed that the healer and the patient bear a relation to each other analogous to that of the telegraphic instruments. But, the fact of the material connection is overlooked. No man can, without the aid of external means, concentrate his thought so strongly as to produce anything as material as the ether, and something as material as what we must have in order to communicate with another. By the aid of wood and saw and plane and hammer, we can concentrate our thoughts, our intelligence, into the visible shape of a table; by the aid of reading and example and drugs, we can concentrate our thought into a shape as tangible as a pill. And this table and this pill are the means—are the ether-waves or the wires, so to say—which form the connection between our intelli-

gence and that of others. They are the *expressions* of thought, not thought pure and simple, not thought volatile, and it is only through expression that any communication between bodies is possible. An ether-wave may spread widely through space, a table may carry its message of use for many years, and a pill can be the means of introducing health in place of disease. But, the thought which is the cause of these expressions can flow only by means of them.

The basis of the telepathist's belief, that he can cast his thought into another's mind, without using material means, therefore, so far as the wireless telegraphy system is considered an analogy, is fallacious; for, the telepathist lacks one of the factors involved in telegraphy, namely, the material connection between the two bodies. The fire from which this smoke of mental suggestion rises is, in fact, existent solely in the mind of the telepathist. We mean the telepathist as he is generally regarded.

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There is, indeed, a real telepathy, a true thought-suggestion, and this we will now consider.

Immediately upon our attention being called to the fact that radiation is a law of every visible thing, we see that it is so. The sun radiates heat and light; a flower radiates those ether-waves which we call perfume and color; a chair radiates rest, if we may say so; a clock radiates the time, and a book, ideas or facts. We mean that, in the large sense, every object has some use, and this use, this capability, it is always ready to call attention to by its very existence; so that, for want of a better word, we may borrow a term from the greatest of these objects, the sun, and say that as *it radiates* its use to man, so all objects radiate themselves.

It is the process of the wireless system working in all things. The instrument radiates its signs, and the instrument external to it that is pitched on the same key, and no other, can interpret those signs truly. Here is a clock keeping the correct time. It radiates that time for those who can read its signs, those who can tell the time by means of a clock, to interpret. We can not say, The clock suggests the time to us, it only radiates it for those to accept who can. That clock is a fact in the universe, and simply *is*. It does not *do* anything. Its very ticking is but an expression

of the force put into it by the person who wound it up. It is we who, if we have sufficient intelligence, do something by aid of it. We tell the time. So with a tree. Its bark, shape, foliage, and so forth, do not suggest to us that it is, for example, an oak. It is we who, if we have sufficient intelligence regarding trees, tell ourselves, by aid of its bark, shape, foliage, and so forth, that it is an oak. If our intelligence is not up to the mark in this matter, we do not name the tree properly—call it a maple, perhaps. And thus it is with all objects. They do not suggest to man, they radiate themselves for man to interpret, and he will interpret them more or less correctly, according to his own intelligence.

It is the same with man himself. What he really is radiates itself for other men to interpret, according to their several intelligences. The rank-and-file telepathists, having learned just enough of this law of radiation to read it wrongly—supposing that objects, men included, suggest themselves, instead of merely radiating themselves—believe that they can suggest a certain specific thought to others, as they believe a tree does or a clock does, without words. So, they try it on a sick man. And the sick man, mystified by their attitude, believing they possess an occult power that will heal him, feels strange sensations run up and down his spine, thinks queer thoughts, has a buzzing in his ears, and perhaps trembles and sweats, fancying all the time that it is the healer's occult power that is causing these things, when, in fact, it is his own intelligence, greater or less, that is working on him. Then he finds his thoughts changed in some respects, these change in a greater or less degree his habits, which have brought on his sickness, his trust in the healer's power lends him confidence and hope, which lead to harmonious bodily conditions. Or, perhaps, the disease runs itself out.

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It is like the holy relics at Lourdes and other places. The reverent worshiper touches them, feels exalted and happy, goes his way, and is healed of his disease. But, we do not suppose the Saint's bone *does* anything to him. It is what he, by aid of that bone, does to himself that he is reaping the benefit of.

And this is the real mental suggestion. We suggest to ourselves certain thoughts

by the aid of such externals as we come in contact with, whether men or things. If these thoughts are harmonious, pleasant, comforting, we find them expressing, in our bodies, harmony, pleasure, comfort, in ratio to their strength.

No person or thing has any real power over us for good or for evil. If sometimes it seems otherwise, it is because we, by our attitude, have submitted to a power that does not exist outside our own minds. Like the bird, which, paralyzed by fright at the sight of its ancient enemy, the snake, forgets or is unable to use the wings that would save it, and drops to the ground an easy prey. And then the unscientific observer claims that a power shot from the snake's eyes and fascinated, hypnotized it. Or, on the other side, like the man who, full of trust in telepathy or in the telepathist, sends a message asking help, and, if his disease is not too deep-seated, is healed, whether the healer treats him or not.

It is our own thought, as expressed in fear, that hurts, and trust, that saves. *Our* fear and *our* trust, not another's, that does it, though we may need that other as a means to feeling the fear or the trust. Those ones of the burning martyrs who were full of trust died in ecstasy under the same conditions in which others felt the most horrible torture. So those among us, today, who have little trust find a great deal of misery and evil in the same circumstances which to others express happiness.

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It must be seen that this essay is written for those who are not physicians and attempts to formulate and give reasons for the mental-healer's point of view; nevertheless, the argument is no less valuable for those who are physicians. The profession of medicine is as much a concentration of thought as that of the mental healer.

And the practicing doctor who, to the skill of his calling, adds the principle of telepathy, as here set forth, and is filled with love and confidence and supreme trust, who has steadfast faith in the inexorable justice and benevolence of the universal law, as well as confidence in his professional ability, possesses a twofold power. He sees that he can make no mistake, that he is a means in the hands of God, and the joy and strength of this knowledge will radiate from him to the increase of his practice, the efficacy of his treatments, and the suc-

cess outward and inward of his life. As his wisdom grows, as his aims acquire universality, he will find himself called, with growing frequency, to the cases to which he is best adapted, and in his profession, as in all his affairs, he will find harmony, strength, and usefulness in those very things which to others mean inharmony, weakness, and failure. This is the law. It is true in all professions. And it is evaded or ignored only at our own cost.

What a magnificent wisdom does the knowledge of these things open to us! It is, as Emerson says of it, "the doctrine of unspeakable comfort." It is not the *thing* that imparts, but, what we think of it, the use to which we put it. We have, each one of us, even the weakest, the power within, if only we will cultivate it, to build our own beautiful world, a power that will protect us from all inharmony, open our eyes to the splendor that lies even in the meanest things, and radiate itself to others, whether through medicine or other means, so that they, too, may, if they wish, employ it for the beautifying of their world.

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To refuse to think evil; to make the best of today; to live superior to revenge; to be willing to extend the helping hand when possible; to work for wisdom and

love rather than for things alone; to forgive injuries, in the knowledge that, if we seem to have been injured, it is because we have dropped to the level of injury and invited it; to look always on the bright side and, if there is no bright side, *make* one out of whole cloth; to feel as much content as possible; to understand that things and persons are means and not causes, and treat them accordingly; in short, to fill our minds with as much content, and sunshine, and love as we can, and use every nameable external as a means of suggesting to ourselves these joy-bringing thoughts—this is the true telepathy, this is the true and only thought-suggestion, it is the only real power in the world, and it is our savior. For, when we have learned it and put it into practice, when we have, through study and experience, found, beyond all question, that to live beautiful lives is, not only to protect ourselves from all evil from others, but, is, at the same time, to be doing all we can for the happiness of humanity, our fears fall away from us, we become healthy, strong, courageous, and happy, and all the beauties of the universe lie visible.

This is the true telepathy, or thought-suggestion, and every person in the world has the ability, dormant or active within, to become an adept in it.

To live content with small means—to seek elegance rather than luxury, and refinement rather than fashion, to be worthy, not respectable, and wealthy, not rich—to study hard, think quietly, talk gently, act frankly, to listen to stars and birds, babes and sages, with open heart—to bear all cheerfully—do all bravely, await occasions—never hurry; in a word, to let the spiritual, unbidden and unconscious, grow up through the common. This is to be my symphony.

—W. E. Channing.

Among the Books

GARRISON: "HISTORY OF MEDICINE"

An Introduction to the History of Medicine: With Medical Chronology, Suggestions for Study, and Bibliographic Data. By Fielding H. Garrison, A. B., M. D. Second edition, revised and enlarged. Philadelphia: The W. B. Saunders Company. 1917. Price \$6.50.

The medical profession is fortunate in having closely associated with the Surgeon-General's Library at Washington a man endowed with such a genius for appreciating the broader spirit of medicine and for expounding the history, both of the craft and of the science, as the author of this book. While it claims to be only an introduction to the history of medicine and modestly presents suggestions for study, the presentation of the subject is of such a nature as to afford sufficiently complete information to all but those who make the history of medicine their special study. Deviating from the trend of other historical works, which were written, very often, from a preconceived and not entirely impartial point of view, the honest attempt has been made in this volume—and, we believe, successfully—to be fairminded, to present the merits of English medicine as English medicine, of German medicine as German medicine, of Frenchmen as Frenchmen, Russians as Russians, and Americans as Americans.

If, as the author declares, this volume was written with a definite literary intention, that of stimulating the physician and student to do his own thinking and research by interesting him in the subject at the start, it must be conceded that he has attained his purpose excellently. The history of medicine, which, in a way, constitutes the history of mankind, is outlined from the very beginning in such a manner as to arouse and keep alive the interest and concentration of the reader, and it is easy to trace, in the relation of Greek, Moham-medan, medieval, medicine, as well as of the other epochs, the origin and development

of opinions of practice that prevailed to within our memory and are being entertained to even this day. The author carries us to the very latest times, devoting several pages to a consideration of war-medicine as it is being developed at the present period. Thus, we read of trench-foot, trench-nephritis, gas-gangrene, as also of Carrel's antiseptic treatment of wounds, Dakin's sodium hypochlorite solution, Wright's hypotonic salt solution, and so on.

The general discussions and historical outlines are enlivened and made even more interesting by copious biographical notes relating to those men who are responsible for the development and improvement of medical practice. Through it all, it must be conceded, the author has been successful in his avowed aim to be fair and impartial. Garrison's "History of Medicine" is an unusually attractive treatise and is warmly recommended for the leisure-hour study of physicians.

"MEDICAL CLINICS OF NORTH AMERICA"

The third number of volume 1 of *The Medical Clinics of North America* is a New York number and contains contributions from 22 of the most important New York clinics. Among others, for instance, we find an article by Prof. Graham Lusk, on calories in common life. Dr. Max Einhorn writes on the diet in diseases of the kidneys; Dr. Warren Coleman, on the typhoid diet.

In an interesting paper on the treatment of lobar pneumonia, Dr. Rufus I. Cole questions the therapeutic value of local application to the chest of any kind, also the merits of strychnine or camphor as stimulants. He is convinced, however, of the decided advantage of employing digitalis in the early days of the disease, not, to produce immediate effects upon the heart, but, to put the patient into such a condition that later, if need arises, physiologic digitalis effects may be obtained quickly by the administration of small doses

by mouth. Doctor Cole places his main reliance upon treatment with the immune-horse-serum homologous to Type 1 in all cases in which this type of pneumococci stands in relation to the disease.

Besides these, other important papers in this number of *The Medical Clinics* might be mentioned; and, altogether, the subjects are presented in a bright, attractive and stimulating manner.

The Medical Clinics of North America is published bimonthly by The W. B. Saunders Company, at a subscription price of \$10.00 per annum.

JANEWAY: "RADIUM IN CANCER"

Radium Therapy in Cancer: At the Memorial Hospital New York. By Henry H. Janeway, M. D. With the Discussion of the Treatment of Cancer of the Bladder and Prostate Gland, by Benjamin S. Barringer, M. D. and an Introduction upon the Physics of Radium by Giocchino Failla, E. E., A. M. New York: Paul B. Hoeber. 1917. Price \$2.25.

This little volume, the first report, covering the period 1915 to 1916, contains numerous case-reports dealing with the administration of radium and of radium-emanation in various forms of malignant disease, as administered at the Memorial Hospital of New York. The authors believe that the details regarding concentration of radium to the unit of surface, the exact nature of filtration, the exact periods of repeated applications, and the successive steps of the therapeutic result, which are important factors, may be clearly deduced from the reports. The book appeals to us as possessing distinct merit.

"THE NEUROLOGICAL BULLETIN."

A new medical journal has been launched, with the purpose of utilizing and making generally available the wealth of material that is to be found in the neurological department of the Vanderbilt Clinic. *The Neurological Bulletin of Columbia University*, of which the first number recently made its appearance, will be largely devoted to the presentation of cases selected from the weekly clinical conferences of the neurological department. An effort is to be made to present clinical reports fully and adequately, overcoming the difficulties, in this respect, that make for contrary condi-

tions in articles published in many of the other journals.

The first number of *The Neurological Bulletin* is, typographically, a pleasing pamphlet of 34 pages, beautiful as to paper and print—the publisher, Mr. Hoeber, has a habit of getting out beautiful journals—and attractive as to contents.

Some of the titles in this number are as follows: Recurrence of an Extramedullary Tumor After an Interval of Eight Years, by Adrian V. S. Lambert; Poliomyelitis, with Prolonged Somnolence, by Frederick Tilney; A Discussion of the Subject of Aphasia, with a Clinical Report of Three Cases, by Michael Osnato; A Case Presenting the Thalamic Syndrome, by P. S. Goodhart; Description of a Summary and Diagnosis Blank, by O. S. Strong; A Case of Syringomyelia, with a Differential Diagnosis, by O. S. Strong; Autobiographic Account of a Case of Acromegaly, with Gigantism in the Family, by Morgan T. Craft.

The Neurological Bulletin, the editor-in-chief of which is Dr. Frederick Tilney, is published monthly by Paul B. Hoeber, at 69 E. 59th St., New York, N. Y., under the auspices of the Columbia University, the subscription price being \$3.00; single copies, 35 cents.

PAGE: "AUTOMOBILE"

The Modern Gasoline-Automobile, Its Design, Construction, Operation and Maintenance. By Victor W. Pagé, M. E. New York: The Norman W. Henley Publishing Company. 1918. Price \$3.00 net.

This edition for 1918 is a practical, comprehensive treatise, explaining all principles pertaining to gasoline-automobiles and their component parts. It is unusually complete and up-to-date, and of decided service to owners of automobiles, especially those who themselves take care of their own cars.

"HUGHES' PRACTICE OF MEDICINE"

Hughes' Practice of Medicine: Including a Section on Mental Diseases and One on Diseases of the Skin. Eleventh edition, revised and enlarged by R. J. E. Scott, M. D. With 63 illustrations. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$3.00.

Here is another old standby of which successive editions are constantly called for. In these days, it means something for a

textbook on the practice of medicine to be published in the eleventh edition. It means that the work has made for itself a firmly established and well-deserved place in the estimation of physicians. That this good opinion is well justified, can easily be seen by reading a paragraph here and there without any particular selection. Discussions are as concise as is compatible with clearness. The treatment suggested is sensible. Altogether, "Hughes" is a good book to have on hand constantly.

WILCOX: "MATERIA MEDICA AND THERAPEUTICS"

Materia Medica and Therapeutics, Including Pharmacy and Pharmacology. By Reynold Webb Wilcox, M. D. Ninth edition, revised in accordance with the U. S. Pharmacopeia, IX, With Index of Symptoms and Diseases. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$3.50.

Wilcox's textbook on materia medica and therapeutics is well known. In the preparation of the present, ninth, edition, the changes made in the last revision of the U. S. Pharmacopeia have been referred to. The volume is small and handy, the print is clear, and the utilization of different sizes of type, also of a thin opaque paper, makes possible the inclusion of a great deal of material in a relatively small volume. The Reviewer often consults this book with much satisfaction and can cordially recommend it.

DEAVER AND McFARLAND: "THE BREAST"

The Breast: Its Anomalies, Its Diseases, and Their Treatment. By John B. Deaver, M. D.; Joseph McFarland, M. D. Assisted by Leon Herman, M. D. With 8 colored plates and 277 illustrations in text. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$9.00.

This is a monographic treatise of the anomalies and diseases of the female breast and their treatment. As is but natural, the discussion of tumors of the breast occupies the main portion of the book. A consideration of the immense literature of anomalies and diseases of the breast is appended to each chapter, and the text gains for being the product jointly of surgeon, path-

ologist, and anatomist. It may be trite to deal in superlatives, yet, we are constrained to designate this work as truly monumental.

WILLMAN: "MARRIED LIFE"

Married Life: A Family Handbook. By Reinhold Willman, M. D. Chicago: J. S. Hyland & Co. 1917. Price \$3.00.

This book, which is intended for the instruction of the laity, contains much good advice. This and the evidently honest desire of the author to be of service to his fellow men, justify its publication. However, the same amount of information and instruction as is contained in the 420 pages could easily have been presented in one-half or even one-third of that space, since there is quite too much repetition. We recommend a second edition, to contain about 100 pages, without repetitions, without irrelevant remarks, without any attempts at "poetry," and, in short, without any padding whatever. The result would be a very good and useful volume.

SOME BOOKS BY MISS COCROFT

The Reviewer is in receipt of three books by Miss Cocroft, written in her usual felicitous and helpful style and which are certain to do much good, as textbooks for the patients themselves. Usually Miss Cocroft is very careful not to pass beyond the line which marks the signal when it is best to consult a physician. Only in "Let's Be Healthy in Mind and Body" it may be objected that too much amateur information is presented to the reader, most of which is almost certain to be misunderstood, with possibly undesirable consequences. Nevertheless, all three books are well worth the careful study of women—and they won't do any harm to men readers, either. The titles of these books are as follows:

"Let's Be Healthy in Mind and Body. How to Build and Retain Health." Illustrated. By Susanna Cocroft.

"The Woman Worth While." By Susanna Cocroft.

"What to Eat and When." By Susanna Cocroft.

These books are published by G. P. Putnam's Son, New York, and can be had in bookstores or bought from Miss Cocroft, the price being \$1.50 each.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6367.—“Chorea or Hysterical Tremor?” O. T., Missouri, has a male patient, forty-four years of age, who four years ago had a “nervous breakdown” and was treated by a specialist, however, with very little benefit. The diagnosis at the time was “chorea”, many symptoms of which disease, the man does present at present. He is very nervous and jerky and does not rest well at night. His breath is offensive most of the time; however, his weight stays about the same and he has a good appetite. He often complains of dizziness and that the bowels usually are loose. At times, he cannot articulate well. As a rule, he has to urinate several times during the night.

Such conditions of nervous disequilibrium require very careful study, and, while it is more than possible that an autotoxemia of intestinal origin is at the bottom of the trouble, some serious alteration in the nervous system may have occurred.

The reflexes should, of course, be tested. Also we would suggest that you send a 4-ounce specimen of urine (taken from the mixed 24-hour output, and stating the total quantity voided) to a competent pathologist, for examination. At the same time, state your patient's height, weight, pulse rate, and blood pressure, and give some idea of his past history; especially is it essential to know whether syphilis and gonorrhea can positively be excluded.

It must be borne in mind that after a “nervous breakdown” so-called hysterical tremor may be present and this closely simulate true chorea. Characteristic of such form of chorea is its dependence upon psychical conditions; but, of course, one must be particularly cautious when passing judgment, for, the nonhysterical varieties

of tremor, even those due to organic lesions, often are greatly influenced by the emotions. A rather certain method of differentiating consists in intellectual and sensory diversion, as, for instance, having the patient listen to the ticking of a watch which is gradually being removed to greater distances from the ear, letting him spell the name backward, and such like. If during such procedure a decrease of the tremor occurs, the probability of its being of the hysterical type is very great and a guide for treatment is then at hand.

You do not state whether the patient now uses or has used tobacco or alcohol in excessive quantities, nor do you give us a clear idea of the character of the involuntary movements or the part of the body affected. Upon receiving more definite information, we may be able to offer more useful suggestions.

QUERY 6368.—“Calcium Sulphide in Mercury Poisoning.” L. B. A., Mississippi, desires literature on the use of calcium sulphide intravenously in bichloride of mercury poisoning.

Dr. J. H. Wilms's article on this subject appeared in *The Journal of Laboratory and Clinical Medicine*, for April, 1917, and there he recommended the administration of calcium sulphide, by mouth, in from 2- to 5-grain doses every hour, until an “excessive” amount has been taken. Intravenously, a solution of calcium sulphide not stronger than 1 grain in 1 ounce of water, boiled and filtered through cotton, may be given. The amount given must be 1 grain of calcium sulphide for each 1 grain of mercury bichloride taken. The solution should be prepared freshly, as decomposition takes place rapidly. One in-

travenous injection is sufficient, and lavage of the stomach then is unnecessary.

Wilms calls attention to the fact that a deteriorated solution is likely to produce convulsions, owing to the action of free calcium on the spinal cord. Another danger is, the possibility of the presence, in such a deteriorated solution, of hydrogen sulphide, which, of course, is extremely toxic.

Attention is called, also, to the fact that the administration of white of egg and also gastric lavage are entirely useless, as mercury bichloride is so rapidly absorbed that very little remains in the stomach at the end of five minutes. The vomiting, moreover, is usually so profuse that, if any free bichloride still were present, it could not remain long enough to cause further damage.

Wilms states that recovery has taken place when the antidote was administered, by mouth, as late as twelve hours after 7.5 grains of mercury bichloride had been swallowed and after thirty hours, when administered intravenously. He considers the intravenous method of giving the calcium sulphide preferable, for the simple reason that the patient thus certainly receives the required amount of the antidote—that is, 1 grain of calcium sulphide for 1 grain of mercury bichloride ingested. Still, it has been proven that calcium sulphide may be administered by mouth, with satisfactory results, when the intravenous method is not practical. Of course, should the condition of the patient warrant, both methods may be employed, and the internal administration of calcium sulphide continued until all symptoms of mercurialism have disappeared.

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QUERY 6369.—“Aconitine and Veratrine in High Blood Pressure.” R. E. S., Ohio, desires information regarding the treatment of high blood pressure with the active principles.

The two most valuable remedial agents are, undoubtedly, aconitine and veratrine. We are sending you a reprint of an article by Doctor Achard, “A Study of Aconite,” which covers this subject and will, we believe, prove of interest.

In this connection, we would call your attention to the fact that for many years we have urged the use of a combination of aconitine, digitalin, and strychnine—the

socalled dosimetric trinity of Burggraeve—as a circulatory equilibrant, and have as persistently advocated the use of veratrine in small repeated doses; this drug acting as a vascular tensor, retarding without weakening the heart's action.

As a matter of fact, veratrine, aconitine, nitroglycerin, sodium nitrite, and potassium iodide are the only effective remedial agents for this condition at our disposal—remembering that the action of nitroglycerin and of its congener, the sodium nitrite, is entirely too evanescent to be considered, except for fugitive purpose.

In every case, of course, it is absolutely essential that the cause of increased blood pressure be ascertained and, if possible, corrected. It is also equally essential that the patient be properly dieted and instructed in the proper mode of living.

You will find Cowing's “Blood Pressure” extremely informative. Other treatises worth consulting are, Mackenzie's “Diseases of the Heart” and Janeway's “Clinical Study of Blood Pressure”. The subject is fully covered, also, in DaCosta's “Physical Diagnosis.”

It is interesting to observe that Thomson, the American herbalist, many years ago, stated that he considered aconite the most efficient and permanently beneficial vasodilator. He says that the only agent which approaches aconite for this purpose is veratrum viride, and adds this statement:

“There need be no fear of primary depression of the heart, because of the relief afforded by dilatation of the arteries. One of the most indisputable proofs of this statement is shown by the prompt increase in the elimination of urea by contracted kidneys. I have shown in several articles that in cases of undoubted shrunken kidneys, accompanied by all characteristic symptoms, the excretion of urea has, by the administration of aconite, been doubled or trebled and in not a few cases quadrupled.”

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QUERY 6370.—“Menstruation During Pregnancy.” C. A. F., Wisconsin, writes: “A patient of mine, a woman who has spent some time on the isthmus of Panama, makes the statement that she was told by women down there that it was common for them to have regular monthly flowings during the months of their pregnancy. My impression is, though, that, seeing that she was so afflicted (and finally miscarried),

they told her this to relieve her mind. Do you know whether there is any foundation for such a statement? Does a tropical climate produce such a condition in Panama or anywhere else? I do not believe it possible."

Obviously, up to the fifth month, when the two deciduas fuse, a menstrual flow could occur and instances where "a normal menstruation persisted during the nine months" have been reported by Caruso and by Pettey. However, whenever a discharge of blood occurs, under such conditions, it is wise to consider it pathologic and to examine carefully for cervical erosions, disease of the endometrium, uterine polyp, fibroids, rupture of a varix at any point in the cervical or vaginal or vulvar canal, extrauterine pregnancy, myxomatous degeneration of the chorion, and so on.

One is reasonably safe in regarding a woman menstruating normally as not pregnant; however, there still is considerable divergence of opinion on this point. It has been pointed out that, save where a double uterus exists, the hemorrhagic discharges occurring during pregnancy may resemble menstruation, but, that they invariably differ from the latter in the quantity and the quality of the blood.

Such a careful observer as Pinard has stated that a case of persistence of menstruation in a pregnant woman had never yet been observed; and Dakin considers that, "while one monthly bleeding may be allowed to pass as a menstruation, in the absence of any other discoverable cause, any repetition should be looked upon as a threatening of abortion and the patient treated on this assumption."

On the other hand, a number of American writers do not regard the persistence of menstruation as impossible; still, as a rule they are careful to speak of the existence of a "periodic flow," instead of using the word menstruation. In this connection, you may call to mind that a few cases have been reported in which the women never "menstruated" except when they were pregnant.

In the present writer's opinion, it is possible for a woman to menstruate, in the true sense of the term, for the first two or even three months of pregnancy; however, after that, when we consider intrauterine conditions, it is only reasonable to presume the show of blood as being pathologic. Of

course, in tropical and subtropical countries, such discharges would be observed more frequently than in colder climates.

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QUERY 6371.—"Eczema Manuum?" J. C. H., Arkansas, has under his care a patient suffering from a skin disease affecting the hands from the wrist to the ends of the fingers, and whom four or five other doctors have been unable to cure. "The skin," he writes, "is rough, red, and angry-looking; there is some itching and burning and the parts bleed easily. The lesions almost heal up at times for a week or so, then itching begins and the patient will scratch the parts until they become very much inflamed. The condition somewhat resembles pellagra. The skin is thickened and little pustules form, which contain a little colored fluid. It does not look like dermatitis or urticaria. The patient is a married woman, twenty-eight years of age, mother of two children. Her general health is good. She has had this skin trouble for one year. Her kidneys are in good condition; bowels seemingly are regular; appetite is good."

We can not venture a positive diagnosis in this case, although we should hesitate somewhat to exclude pellagra without having much more definite evidence. It is possible, however, that you have to do with the vesicular form of eczema manuum. As a matter of fact, the diagnosis rarely is difficult and the disease can readily be distinguished from dermatitis venenata, pompholyx, and syphilis.

Women who naturally are obliged to have their hands in water a great deal should wear loose rubber gloves, and the hands always should be protected from cold and wind by wearing gloves.

In the moist types, the conjoint use of black wash and zinc-oxide ointment is most serviceable, or, a boric-acid wash may be employed, with the supplementary use of some such ointment as, for instance, this: dried alum, grs. 5; ichthyol, grs. 10; phenol, grs. 5; resin cerate, enough to make oz. 1. The present writer finds the following creolinated zinc-oxide ointment most efficacious: zinc oxide, 20 parts; creolin, 2.75 parts; ceresin, 10 parts; petrolatum, enough to make 100 parts.

Always, as a matter of course, the underlying disorders of the body-chemistry must be recognized and corrected; that is to say, thorough elimination—renal, dermal, and

intestinal—should be maintained, the patient placed upon a carefully regulated diet, and digestion assured. Very often arsenic sulphide, 1-64 grain, after each meal, gives excellent results. Where there is anemia, the triple arsenates with nuclein will prove preferable.

We suggest that you have this patient's urine and blood examined.

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 QUERY 6372.—“Lymphangitis?” E. M., West Virginia, is treating a very severe and stubborn case of lymphangitis, involving the left arm beginning in the left ring-finger and extending to the elbow. The auxiliary glands are not involved, but, the patient stated that some time ago the muscles of her neck on the left side were stiff and gave her a great deal of pain. She is normal in other ways and the trouble can not be traced to any infection. She is robust, thirty-nine years old, and has given birth to four normal children.

It is difficult to offer diagnostic and therapeutic suggestions in the case you so briefly describe.

You do not tell us whether the affected area is markedly edematous or give us any idea of the condition of the body-chemistry. It would be well, we think, to have both the urine and blood examined.

As you are aware, such an affection of one arm and hand may be the result of a tumor of the mediastinum or lung, aneurism of the arch of the aorta, axillary artery, thrombosis of the axillary vein, or enlargement of the axillary glands. The latter condition, you state, does not obtain in this patient.

If there is no marked edema, but, simply a sensation of stiffness and pain, you may have a toxic neuritis to deal with; but, you definitely speak of a lymphangitis. Such a condition beginning with the left ring-finger and extending only to the elbow, is distinctly peculiar. We can only think that there has occurred laceration of a lymphatic trunk or an occlusion of such a vessel by external pressure or internal obstruction.

If you will give us a clearer clinical picture and, at the same time, forward a 4-ounce specimen of urine (taken from the mixed 24-hour output, stating total amount voided) and also a blood-smear to a reliable

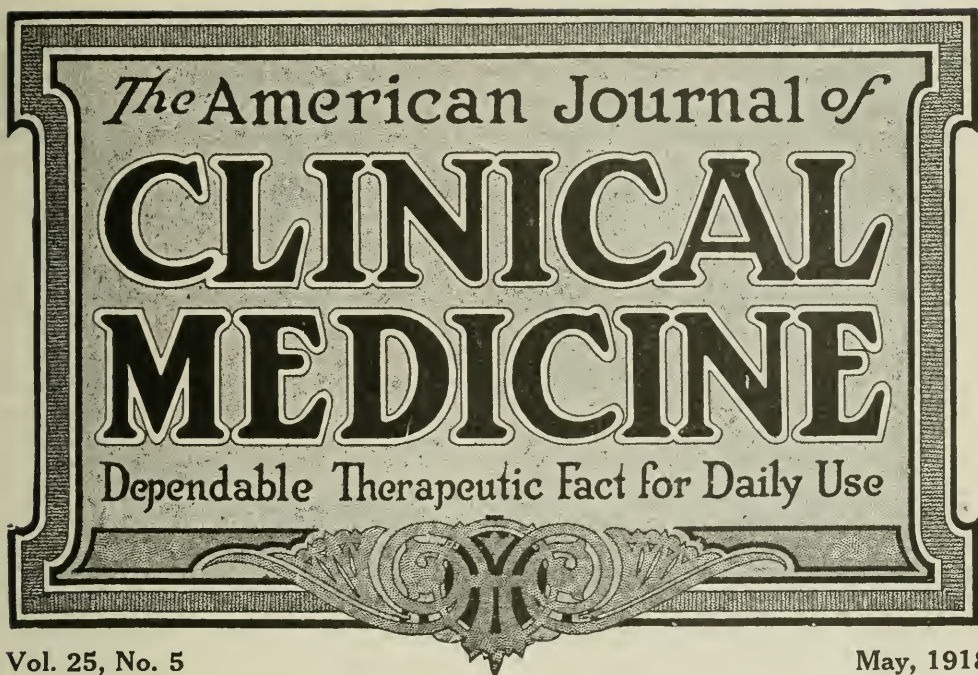
pathologist, for examination, communicating to us the text of the report, we may be in a position to aid you more intelligently than we can now.

State also, please, the surface temperature of the part involved, the amount of swelling, the existence of hyperesthesia or anesthesia, and the presence or absence of pain upon pressure over the upper part of the nerve-trunk supplying the area. Is there any tenderness along the cervical or dorsal vertebrae? Any tendency to hysteria?

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 QUERY 6373.—“Vulval Verrucae.” E. A. B., Michigan, desires advice regarding a patient who presents on the vulvæ a chain of “hard, thick warts.” He can not determine whether there is any gonorrheal or specific cause. Ordinary warts usually appear in groups and may or may not be pedunculated. If the latter, the best way to remove them is, to snip them off with a pair of scissors. Such warts are usually due to lack of cleanliness, to friction or pressure, though some writers have attributed them to an impaired condition of the body-chemistry. They cause no subjective symptoms unless they become irritated and inflamed, whereas venereal warts are almost always attended with an irritating discharge.

Internally, patients afflicted with ordinary warts may receive, with advantage, small doses of arsenic, say, 1-64 grain of arsenous sulphide after meals, or the triple arsenates of iron, quinine, and strychnine; as alternants thuja in 5-minim doses three times a day, alternated week and week about with tincture of iodine, 5 to 10 drops, well diluted with water twice daily.

If the warts are too numerous or too large to be removed by excision, the local application of nitric acid may prove satisfactory, the surrounding tissues first being smeared with petrolatum, and the acid applied by means of a glass pen (the kind used in marking with indelible ink). Deep cauterization should be avoided, by making several light applications of the acid, instead of using a large quantity at one time. Also, the salicylic acid and flexible collodion mixture (1:8) is very efficient. Lactic acid or acetic acid, also sometimes give excellent results.



Children, and the Food-Problem

WHILE all classes of people are suffering from this war, it falls with heaviest force upon the children. In the war zones, their helplessness and low resisting power make them peculiarly liable to fall victims to the privations incidental to war. Then, the campaign of frightfulness instituted by the Huns has added immeasurably to the mortality of noncombatants, especially the children. At the outbreak of hostilities, this people stopped to explain—they couldn't excuse—this deliberately planned campaign of frightfulness, on the ground that it was a war measure designed to strike terror into the hearts of their enemies. Possibly they may have expected something of this kind; but, after nearly four years' experience, has anybody noticed a solitary instance of terror inspired in the fighting man by the ruthless murdering of the children? It is time, surely, that the pretense be laid aside and that the Germans acknowledge that their warfare upon women and children is simply a brutal satisfaction of the native cruelty that possesses the hearts of these were wolves. Instead of inspiring terror, these acts have given rise to a cold, relentless

conviction that extermination is the only remedy for this race, just as we should exterminate a brood of venomous serpents that infested our premises.

Meanwhile, it is hard on the children. Besides this, the sacrifice of millions of the population of Europe among the fittest to become fathers, the curtailing of foods, and the vastly increasing manual labor thrown upon the possible mothers have markedly diminished the birth rate. Nothing is more certain than that a war such as this results in a long-enduring deterioration in the quality of the baby crop. In Europe, this problem has become so serious that it is engaging the attention of scientists and governments among the belligerents. While we, in America, feel the influence to a much less degree, we feel it, nevertheless.

The advance in the cost of living falls with special weight upon the children of the poorer classes. While wages in general have risen, the increase has not been commensurate with that of the cost of food. Under the circumstances, it is inevitable that the cheaper kinds of food will be substituted for those that have most notably risen in price; and, unfortunately, it is precisely in

those of our foods most essential for the development of the young that the rise has been, most decided.

We now know that it is not sufficient that a balanced diet is provided for the growing young of man or beast. No matter if the full proportion of proteids, carbohydrates, hydrocarbons, and mineral elements are found in the diet, this is not enough to provide for the healthy growth of the young animal unless the food also contains an ample supply of vitamins; and it is precisely in the fats of milk and eggs that our greatest supply of these essential elements is to be found.

Securing an increase of wages seems to be the only thought controlling the working-men's organizations, for the correction of existing evils; but, this by no means meets the situation. Nothing is more certain than that, if you double the sum which the laborer's wife finds in his pay-envelope on Saturday night, the money will not be spent as judiciously as was the previous smaller sum. Visions of wealth, of luxury, of articles long coveted but looked upon as impossible of attainment occupy her mind as the double allowance of banknotes tumbles into her hand. Music, finer clothes, even an automobile no longer are absolute impossibilities, and, under this unhealthy stimulus, the good housewife now brings home cheap substitutes for butter. Now, while peanut butter and oleomargarine may satisfy the palates of the children, they do not contain essential vitamins. The average woman doesn't know this; she doesn't realize, when she sees her children applying themselves to the substitutes for good, wholesome butter, that she really is starving them. And so the evil is done.

The trouble is, that we all are taking the wrong end of the problem. Increasing the wages, even to or beyond the mounting price of food, does not solve the difficulty; for, in fact, each material increase in wages is certain to be followed by a further increase in the market-price of foods. Moreover, the people feel so affluent when they see the big wages brought home by their men folk that they do not really care how much the grocer charges.

The true solution of the difficulty lies in providing cheaper foods that are fully adequate for every bodily need. Since the one paramount essential for the growing child is a sufficient supply of vitamins, we must

seek to find sources for these principles less costly than butter and eggs. As a matter of fact, one such available source we already have in alfalfa. All the preliminary work in this direction has been done. We know that a large variety of food-products for human consumption can be prepared from this clover. We know that it contains 14 percent and more of proteids, while no other food compares with it in its proportion of vitamins, excepting butter and eggs. We have been told how to prepare it in many palatable forms. The supply is inexhaustible and it can not be made so costly as to interfere with its general use. In fact, its utilization as a human food has been calculated to add from 25 percent upward to the total possible stock of food for human consumption.

The one question is, how to induce the people to utilize it, and in this, it seems, we must look to our own profession. Every physician should make himself perfectly familiar with the researches that have been made on the subject of the vitamins and their influence upon the nutrition of the young; then we should take pains to find market supplies of the wonderful "lucerne" in shape for human consumption. These preliminaries being settled, we should start, each in his own sphere, the missionary work of inducing the people to use this great boon. If we can not find a market supply of alfalfa, we should storm the millers, the wholesalers, the jobbers, and the manufacturers of food-products, until we compel them to take the matter up in earnest.

This, it seems to us, is the true and only solution of the question—and its importance is undeniable. For a hundred years, the world is going to be busy catching up on its baby crop. It simply must save its babies, once born. It must give them the best physical development that is possible; and, despite all the deteriorating influence of the war, we believe that by utilizing the knowledge we possess we can produce a crop of babies notably superior to the average of those of previous pre-war periods.

The great difficulty in the way of this program is, the inertia which renders it so difficult to start a radical reform; and this is more evident among the medical profession than among any other class of society. Let somebody start some fool notion such as Bergeon's gas-treatment of tuberculosis, and we doctors go crazy over it. But, bring

out some well-founded, solid, unassailable and most important improvement in our means and methods—as, for instance, the substitution of the alkaloids for the old worthless uncertainties—and we have to fight tooth and nail for a quarter of a century or longer to get our brethren to pay any attention. That's one of the drawbacks of our blooming democracy, and we have to put up with it. The autocrat can issue his orders, that every child in his dominion shall have a daily ration of alfalfa, and it'll get it; and as soon as the people get used to it and realize its inestimable value they will come around and thank their master for having done what he has. Well, so be it.

God hides some ideal in every human soul. At some time in our life we feel a trembling, fearful longing to do some good thing. Life finds its noblest spring of excellence in this hidden impulse to do our best.
—Robert Collyer.

WHAT MAKES GERMANY SO STRONG?

We hear a great deal about the distinction to be made (or not to be made—according to what the viewpoint of the person talking happens to be) between the German government and the German people, in this unhappy struggle; especially since the President drew his official line of demarcation between the two. The question is argued back and forth, with considerable warmth on both sides; some stoutly asserting that the German people are the helpless, even the unwilling dupes of the Prussian oligarchy, and that in fighting that autocracy we are really fighting in their behalf and, as it were, by their side; while others just as emphatically scout such a differentiation and sweep the government and the people into the same class. The real truth is, that both of these positions are right; that they are not so irreconcilable with each other as they seem to be, but, on the contrary, perfectly compatible; and that, in fact, it is only by an intelligent perception of their congruity that one can gain an adequate understanding of the true psychology of the situation and explain the solidity and tenacity of the German nation in this supreme frightful combat.

If either of these two views of the situation were true, to the exclusion of the other, it would have been psychologically—one might almost say, historically—impossible for the war to have lasted as long as it

has. Lincoln's famous dictum, that "you cannot fool all the people all the time," is the homely expression of a sound psychological and ethnological principle.

If we assume that the German people were led into this war, and kept in it, by a sheer system of deceit and duplicity on the part of their leaders, it is simply unthinkable that such utter imposition could be sustained for such a length of time and under such conditions as the last three or four years represent.

On the other hand, to assume that the German people were deliberate and open-eyed partakers in the crime of the ages perpetrated by their military junkers, is equally to run one's head against a stone wall; for, there is another psychological and ethnological truth just as well established as the one we have just considered, namely, that you can not *corrupt* all the people all the time.

I probably shall be told by the extreme advocates of one or the other of these opposing opinions, or by both, that, once having been duped into participation in the war or having deliberately consented to it, the German people have been forced by circumstances and by the crushing power of the military arm to stay in it; that, having taken hold of the bear's tail, whether by enticement or by choice, they find it impossible to let go. To this, the obvious rejoinder is, that opportunity after opportunity has been given them of "letting go", but, they have persistently declined to do so; thus showing that the passive deception or the deliberate partnership, whichever we are disposed to attribute to them, still persists.

But, why do I insist that the collapse of either of these two assumed influences among the German people would put an end to the war—or at least begin to shape it toward an end? Granted that they have been deceived and duped as to the causes and objects of the war; why does it follow that a revelation of such deception should weaken, if not wholly destroy, their will to win? Assume that at the outset the great majority of the German people deliberately and with open eyes participated in a crime against civilization; what reason is there to conclude that an awakened conscience should cause a collapse of the military power—which has no conscience?

The answer involves another great, inviolable human principle; and it is to this

profound aspect of the matter that I wish to call attention in this editorial.

No nation can carry on a war entailing such devotion and sacrifice as this war has entailed upon the German nation, unless the soul of the great mass of the people believes in and assents to its moral justification. No evil purpose that is all evil can succeed or even gain headway—no evil purpose, that is to say, that involves a whole people. They can neither be duped nor coerced into participating in it; certainly not to the extent of devotion and sacrifice. Nor can they be corrupted into assenting to it. All mischievous undertakings that depend upon popular support derive their driving power, not from their mischievous elements, but, from the admixture of good in them, and from the conscientious advocacy—yes, and the willing advocacy—of decent people, to whom the undertaking, as a whole, seems to be good.

This is what constitutes—as we see it (and we believe ourselves to see it aright)—the profound whole danger of the German system. To the people of Germany it has been, on the whole, a good system, worth perpetuating and fighting for. Make no mistake! The German people believe in their government; not, because that government has duped them (although we believe it has); not, because they are all as corrupt as we believe that government to be; but, because to them it has been a good government, in which the good features have overwhelmed and obscured, as they were subtly meant to do, the sinister evils with which they were bound up.

We might as well recognize this truth. We *must*, if we are to grasp the true state of affairs. I remember a British cartoon that appeared just after the President had drawn his famous distinction between the German people and their masters: in which a Tommy said to his pal, "I see somebody is saying that we ain't fighting the German people"; to which his comrade sneeringly rejoins, "Will the blinking idiot kindly tell us who it is we've been up against all this time?"

There you have it. Whatever may be our attitude toward the German people, be sure that the German people are fighting *us*. And they are fighting us earnestly and solidly, not, because they are duped into it or because they are shameless partners in the crime of their leaders, but, because they believe in their government and because

(strange as it may seem to us) their government has given them cause to believe in it.

This is what gives Germany her great strength. It is true, in the ultimate sense, that her people are misled by their leaders. It is still more emphatically true, as President Wilson has pointed out, that there is a marked difference between the German people and their masters—the difference between deliberate schemers and sincere advocates; but (do not let us forget), deliberate schemers in, and sincere advocates of, the same cause.

From which (let us likewise not forget) two things deduce themselves: first, that both the deliberate schemers and the sincere advocates will fight us with equal determination and tenacity; second, that the schemers derive their indomitable power from the sincerity of the people.

It is true, again, from another angle of view, that there is *no* difference between the German government and the German people, in that they both partake, in effect, in the crimes of the former against civilization. However, the people are partakers in much the same sense that the purchasers of Standard oil, as also the employees of the Standard Oil Company, are partakers in the industrial oppression which some of us believe that corporation has committed against society. And I wish to point out, again, that, just as these industrial monopolies derive color of moral justification from the association of thousands of decent people who see only the good in their systems and conscientiously support them, so does the German autocracy derive its moral and physical power from the millions of decent, thinking people to whom for many years it has been a good government.

One of my German friends recently reproached me because, whereas, at the beginning of the war I expressed my sadness that we should be found fighting against the people from whom we got our Kris Kringle and our Christmas hymns, and our Grimm's fairy tales, now I am writing drastic arraignments of the German government. I do not go back one whit on either of these two positions. I still am sad at the thought of having to fight the German people—sadder than ever, because I realize more than I did then that these decent, home-loving, admirable German people—not by being crassly duped, as some imagine, nor by being shameless partners in

crime, as others aver, but, by reason of the very qualities that make them admirable—constitute the moral and physical strength in which the conscienceless Prussian autocracy stands entrenched; that, in order to overthrow the latter, we must fight the former—no sham fight, but, a deadly struggle to the death.

THE DANGER OF ALCOHOLIC MEDICINES

From time to time, I have stopped to call attention to the danger of rousing a slumbering craving for alcohol by the use of remedies containing this drug. The danger is an occasional one. Instances do not occur very frequently, still, they do occur with sufficient frequency that there is not a physician having a practice of average size who can not recall instances coming under his personal observation; and, believe me, one decided case of this kind is a-plenty. It is no small advantage in the use of granules and tablets and of remedies generally that may be given simply diffused through water that this peril is thereby avoided.

We note that *The Journal of the Outdoor Life* is taking this subject up actively. In the November number of 1917, page 339, it says: "*The Journal* stands for prohibition, but, it stands for prohibition, not only of alcoholic beverages sold under their right name, but, for the prohibition of medicines that will produce drunkenness, destitution, and disease just as quickly as will beer and whisky. If the prohibition of alcoholic liquors is not to mean the rapid expansion of the much more iniquitous plague of fake-cure advertising, with all of its consequent evils, it is high time that social workers take a stand for complete prohibition or control of this latter industry, as well as of the liquor interests."

There we have the matter in a nutshell. The worst of it is, that this iniquitous drugging insidiously and unsuspected by the victims creates alcoholic habitués. In the old, old days, we knew two brothers who were well-advanced in years. One of them kept his whisky-decanter always supplied. He would take little nips, repeated every few minutes, until he felt comfortably "pickled", and thereafter sip just often enough to keep himself in that beatific condition. His brother was the most prominent temperance-worker in the community, subscribing

for and distributing temperance-publications by the hundred, and never failed to throw his influence against the use of liquor. However, he purchased Hostetter's Stomach Bitters by the case and used it precisely as his brother tippled his straight whisky. Both these old men sank, in time, into their graves, the younger brother to the last unconscious that he was a habitual drunkard.

If we could read the secret history of our enemies we should find in each man's life sorrow and suffering enough to disarm all hostility. —Longfellow.

THE NAVY—GOD BLESS IT

Some surprise has been manifested over the fact that the call to men in our new navy has been so largely filled by recruits from the great Midwest. Few of these men had ever seen the sea. To most of them, it seemed to be but a name; but, in truth, it is far more than this—it is a tradition and an inheritance.

The home of Saxon and Angle, Dane and Norseman was the storm-swept shore of the northern ocean. The sea carried them to Britain. Centuries later, the sea carried their liberty-loving descendants to the shores of America. It is in the blood and, even as Xenophon's Greeks welcomed the sea with shouts of "*Thalassa, thalassa*," so the call of the deep stirred the profoundest depths of our being.

It was with no little pride, therefore, that we read of the Navy's preparedness when the need reached us. God bless the American Navy. Our first line of defense has been proved to be worthily manned and worthily led; for, seeing the gathering storm, every possible precaution was taken, every preparation made, and the result is all perceptible. The arrival of the first American flotilla in the war zone marked the sharpening of the conflict and quickened the action of securing the results most gratifying to us all. Very little was said of resistance to submarines by merchant vessels until our own American ships began to shoot back with effect. In every branch of the Navy's work, efficiency was manifested at the start and has been constantly increasing, and, yet, in the military words of John Paul Jones, "we haven't begun to fight yet."

In all the foregoing, there isn't a word that is not fully applicable to the work of the medical corps. We have before us the

annual report of Surgeon-General Braisted of the Navy, chief of the bureau for the year 1917. It is very gratifying reading. On nearly every page, we find items we should like to tell you about; how the personnel of the medical corps was raised from a strength of 345 to something like 1,800 officers available for duty for one kind or other, and this without in any degree lowering the very high standard of the Navy. Pains were taken to secure men from the very best classes, and the navy medical schools afforded instructions to the newcomers on the duties peculiar to the service that are not taught in the ordinary medical colleges. Besides this, the dental corps, the nurse- and the hospital corps, and all other accessory bodies were, likewise, developed in personnel and subjected to the most thorough training available.

Great extensions have been made to the hospitals, so that, once the demand is made for their services, there will be a place to put every patient at all likely to need hospital treatment. From nine to twenty-four new buildings have been added to each of the six eastern hospitals that the equipment demanded. The arrangements for isolating patients afflicted with contagious diseases could not be better than they are under the circumstances.

Not the least of the many duties falling on the medical corps has been the selection of suitable men for the aviation service. But, indeed, we could go through this report and fill page after page with excerpts of profound interest, showing the good work done by our colleagues of the foul anchor. The treatment and early collection of ample stocks of the most-needed drugs; the production of vaccine-points by the hundred thousand; of antitoxins by millions of units; the association of skilled specialists wherever required; improving equipment of ships being built; these are some of the means by which the worth of our young sailor has been credited.

To deify and unduly extol the Moderns is becoming to no reasonable man. Medicine is not a production of human reason, but a daughter of time, originating in long experience. —Giorgio Baglivi.

PRESERVATION OF VISION

In the work of the selective-service boards all over the country, the great frequency of defective vision has attracted the

attention of physicians in an unusual degree. The necessity is realized, of taking steps with a view to the prevention of this defect in the growing and in future generations.

We are informed by the Illuminating Engineering Society (No. 29 West Thirty-Ninth Street, New York City) that a revised edition of its "Code of Lighting School Buildings" is now being placed in type. It will be remembered that the first edition of this code was circulated, several months ago, for the purpose of obtaining discussions and criticisms. As a result, some one hundred communications have been received from lighting-experts, architects, educators, and school-superintendents. These have been carefully considered by the committee on lighting legislation in its revision of the technical data and principles of school lighting, which are embodied in the code.

Some 20,000,000 school-children in the United States daily perform work trying to the eyes. Proper illumination is essential. Available statistics show that nearly 10 percent of the school-children examined have defective vision. The exactment of rules and regulations and the dissemination of knowledge relating to correct lighting-conditions is one of the most important duties of our educational institutions and legislative bodies.

While the code is intended primarily as an aid in formulating legislation relating to the lighting of school-buildings, it is also intended for school-authorities as a guide in individual efforts to improve lighting-conditions.

The revised edition of the "Code of Lighting School-Buildings" is being printed and will be sold at cost to interested parties.

MENTAL SANITATION

The province of sanitary science is supposed to be the physical world. Its office is, to minister to the physical well-being of humanity. It is not generally supposed to enter the realm of metaphysics and lay its balm upon man's psychic existence; yet, the relation between mind and body is such that whatever affects one more or less directly or indirectly affects the other. Physical suffering creates mental disturbance, and the physical ills surrounding the body illy affect the mind, and the re-

flex of this disturbed mental condition debilitates the physical forces. We cannot dissociate filth and disease, and with them we always expect to find a low mentality.

In the forsaken, poor, and filthy districts of our cities, amid the squalid homes of poverty, we find low physical and mental conditions. These gloomy, pinched, and oppressive surroundings dwarf alike the mind and body and transmit to posterity the curse of feeble minds and feeble bodies. The influence of these noisome abodes quickens the ills that waste the latter and prey upon the former until the higher motives of the soul are lost amid the ruins of wrecked purposes, blasted hopes, and a shattered faith in the gentler mercies of Providence.

The pride of life is banished by the hardships of living and every joy that brightens the mind, and every comfort that lightens existence yields to trouble, worry, suffering, and all the miseries following the gloomy and spiritless train of want and disease. Energy deserts the worn body, hope forsakes the discouraged mind, and both are left to a helplessness that is unable to remove from life those unsanitary surroundings and disease-breeding conditions that so far destroy the nobler impulses of the mind as to disqualify it from rising above the low conditions into which it has fallen.

On the other hand, sanitation has a salutary influence on the mental as well as the physical existence. There is a sympathetic action of the body on the mind and a reflex action of the mind on the body. Salubrious surroundings, the observance of sanitary laws, with the accompanying sense of cleanliness and security, place the mind in a state of enjoyment of these things and fill it with a deeper appreciation of the health and vigor these observances bring.

Through these influences, the mind is filled with the consciousness of right living—life freed from the contamination of filth, the degenerating influences of disorders, slothful indulgences, and the debilitating effects of unhealthful surroundings. The sense of such living not only is enjoyable and invigorating, but, it is ennobling and purifying. It touches the mind with a soothing hand that comforts and strengthens. It fills the mind with the consciousness not only of existence,

but, with the consciousness of right living and the beauties of a well-rounded, symmetrical life.

The sense of having properly observed the laws of health lends a charm to living that makes life more appreciable and enjoyable and its purposes and destinies better understood and more sacredly regarded, its powers more valued and its possibilities more fully recognized.

The effect of the mind, thus refined and cultured and invigorated, acting back upon the body is most salutary and well understood. It cannot fail to recognize the importance of right living and to direct the course of life in conformity therewith. It is no longer indifferent to, or neglectful of, the conditions of health, and will not allow a departure therefrom, to mar, debilitate or destroy the physical being. Sanitation has reached the mind and set its seal on the source of all action, and directs all conduct in accordance with its refinement and quickened sense of the importance of a life true to its nobler being, higher purposes, and greater possibilities.

There is a better thing than the great man who is always speaking, and that is the great man who only speaks when he has a great word to say.

—William Winter.

DO NOT FORGET THE HEART

An automobile cannot run well, a steamer cannot make its voyage nor a set of machinery do its required work, unless the engine is strong and in good working order. This is axiomatic and recognized by everybody, and no one is surprised at the delay when the engine is reported out of order. However, many physicians seem blind to this fact, and try to treat their patients as if a sound heart unquestionably were behind the system, and that the trouble needs must be somewhere else in the system.

If we will carefully examine the heart in each and every patient coming to us for treatment, we shall be amazed at the number of weak and crippled of such organs disclosed. By studying the histories of our patients, we often shall learn of a childhood scarlatina or rheumatism, that crippled the heart. The patient will maintain that his heart is all right and may cite as proof his having passed one or more examinations for life insurance. Yet the bronchitis or the gastric fermentation

or renal insufficiency does not yield to the orthodox line of treatment. As soon, however, as digitalis or another cardiac is resorted to, and thus the circulation improved, his complaint disappears.

Altogether too many diseases are regarded as entities, both by patient and by physician, and are treated as such. We should remember the fable of the rebellion of the different organs of the body against the whole, which resulted in disaster to the body, special as well as general. All parts of the body are interdependent. The stomach cannot do without the help of the heart any more than it can give up the absorptive glands. The bronchitis that does not yield to the use of expectorants needs the aid of heart tonics and vasomotor dilators.

No doubt, in cases of diphtheria, scarlet fever, acute rheumatism, and the more important acute infectious diseases, the heart gets enough attention, and to spare; but, the chronic troubles, which make up the bulk of our practice, need more attention paid to the propelling energy; and, when the help is turned toward the heart, the chronic ailments will be changed the better. If the result is not a cure, it at least will be increased life and freedom from pain and discomfort. These patients need all our help.

Once more, examine your patients thoroughly, and "forget not the heart."

Ennui, perhaps, has made more gamblers than avarice, more drunkards than thirst, and perhaps as many suicides as despair. —Colton.

WHAT TO DO WITH THE OLD PEOPLE

In *The Medical Review of Reviews* for November last, Dr. M. W. Thewliss contributed an article on the importance of providing aged persons with work, and what he says is as true as the subject is of importance. The necessity of occupation is as great in the case of old people as it is in that of children and adults, while the possibilities of harm due to the tedium of idleness persist until mental activity has ceased altogether or until life is extinct.

The question is what to do about it or, rather, what manner of occupation to provide for the aged. Doctor Thewliss refers to several instances where old men or old women retained the management of their

business affairs even after they had passed the age of eighty and through this instrumentality retained a high degree of physical and mental vigor as well as the active respect and affection of their surroundings. It may be humiliating, but, nevertheless, it is a fact that the presence of the aged granddad and grandmother, when they sit by the fireside doing absolutely nothing, very soon becomes irksome and that, in consequence, there is unpleasantness in the family, thus resulting in unhappiness to the old as well as to the younger people.

It has always been with great hesitation that the present writer agreed to the desire of his aged patients to "retire", unless some interesting occupation could be provided, one that would take the place of the abandoned business interest and would keep them from feeling themselves a hindrance or a useless encumbrance.

The mentality of the old people is peculiar in many respects; above all, they sometimes are morbidly sensitive, while others may show a surprising and unaccustomed lack of interest for anything but their own concerns. We have known old people, who had lived unusually busy, unselfish, and benevolent lives, to grow self-centered and evince a selfishness and want of consideration for the wishes of those upon whom they came to depend that was startling.

But, we also have seen old people bemoan pitifully their inability to follow their former pursuits and to be touchingly grateful for any small occupation when they could be persuaded that the result of their work was of actual use and that it was not offered merely for the sake of satisfying them.

While in the case of aged women it is relatively simple to provide them with suitable occupation, there always being many things to be done about and in the house that they can accomplish readily and without undue fatigue, it is not so easy in the case of old men. Doctor Thewliss pleads that they should be given positions involving relatively slight responsibility, and but little exertion. Some old men undoubtedly could act as night-watchmen in office-buildings and elsewhere, while retired business men could be occupied in keeping in order the books of two or three small neighborhood stores. If a man is handy with tools, he may turn his attention to the making of toys or to other manual pursuits;



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Major General William C. Gorgas.
Surgeon General U. S. Army.

while, also, as Nascher has pointed out, gardening and plant culture provides a simple, yet interesting, occupation for the aged people.

Certain it is that old people, unless they are actually ill or debilitated, should not be permitted to be idle, but, should be given light tasks; however, it must not be forgotten that the accomplishment of these tasks calls for definite commendation and even praise, even though the results may not be of definite value and, in fact, merely be serving to encourage the old in feeling that they still are of some use in the world. There is nothing quite so pitiful and humiliating as the consciousness of being shelved

absolutely and definitely, the knowledge that the world has passed you by and that you have ceased to be a figure in its calculations. We shall all come to it in time. Let us treat our old folks as we ourselves shall want to be treated by those who are following in our footsteps.

Democracy will itself accomplish the salutary universal change from delusive to real, and make a new blessed world of us by and by. —Carlyle.

RAISING THE SINEWS OF WAR

While we are getting ready for this issue of CLINICAL MEDICINE, the Third Liberty Loan is being started all over the country, a



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Surgeon General U. S. Navy.

tremendous drive being initiated and carried through for the purpose of raising the huge sums of money that are necessary for the conduct of the war. Many prominent people in every walk of life are devoting time and effort to the task of securing subscribers and carefully instructed teams of solicitors are combing the residence districts for the same purpose; even the children have enlisted their aid in this nation-wide undertaking; in short, the entire nation has arisen, in order to encourage itself to put up the means for the great struggle between right and brute force.

It hardly seems necessary to more than call attention to the Third Liberty Bond is-

sue that is now before the public. Oratory, moral suasion or forceful insistence could not bring it home to our minds more strongly than it already is impressed upon them that our wholehearted and enthusiastic support of the Government is a necessary and unavoidable consequence of the social and political upheaval that has been staged in European countries these three years. Even if we would, the American people could not hold aloof, could not remain apart, depending upon the peoples of the Entente to fight out the war. It is our war as much as it is that of England and France and Italy and Belgium, and we are concerned in it, and were from the begin-



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Surgeon General, U. S. Public Health Service.

ning, as much as were these other nations.

Why, then, should there be any question

at all about the necessity of responding to the request for money and funds, on the part of the Government? There should be



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Member of the Advisory Commission of the Council of National Defense.

none; nay, there is none. Every true American recognizes the need of getting behind; every one knows that money, and again money, and yet again money is indispensable as a means of maintaining the armies at the battle front, in the training camps, on the farms, and in the factories; all these armies being made up of soldiers and of fighters who are doing their share, each one in his allotted place, toward the same purpose.

If anyone should hesitate to contribute his utmost toward the conduct of this war in support of civilization, of liberty, of democracy, let him ask himself whether he would wish to have the battles fought out on American soil. No? Very well; then let

us buy Liberty Bonds; as many as we can pay for; even if we have to go without luxuries; even if we have to give up some things that we have come to consider necessary and that, yet, are nonessentials.

OUR LEADING ARTICLES

In this number we take pleasure in printing several articles, from medical officers now in active service, which throw an interesting and instructive light on conditions in camp. It really is a matter of course, but may be mentioned that these articles are published with the permission of the Surgeon General of the Army. This permission is absolutely necessary, but it is never withheld unless for grave cause.

Leading Articles

The Effects of Camp Training Upon Drafted Men

A Study of Camp Grant

By CAPTAIN EDWARD J. ABBOTT, M. R. C., Camp Grant, Rockford, Illinois

AMONG the many historic names of the Mohawk Valley, none is more fondly cherished than that of "The Iron-Hearted Regiment". The men of the valley, mindful of their revolutionary sires, as members of this regiment, fought and died that liberty of the people, for the people, and by the people might not perish from the earth. We of the Mohawk Valley are proud of the Iron-Hearted Regiment, proud of what they were and did to merit the title "Iron-Hearted". Today, I, a Mohawk Valley man, am proud to belong to a new "iron-hearted" regiment—the Iron-Hearted Regiment of the Windy City, the Melting-Pot Regiment, which has earned its title by its steel-like sturdiness, its hardness of physique, its intrepid purpose.

About the Melting-Pot Regiment.

"Melting-pot" is a well-chosen term; for, like the melting-pot used in making crucible steel, the pale-sallow striplings—the self-indulgent weaklings, men who thought of physical exercise in terms of self-indulgence, whose wills were like rubber tubes bending in the line of least resistance—have been melted together by the fierce purpose of the commander, have had blown out of their lives all dross and weakness by the revivifying force of his precept and example; they have had imparted to them, as the blast imparts to the iron, the sturdy toughness and full-hearted devotion of their leader, Col. Charles H. Howland.

A Sketch of Colonel Howland

Colonel Howland stands four-square—a man among his men. His commands show

that he himself has learned the lesson of obedience. His command "Forward" finds him in the van, and where his men are there you will find him, also. He has stood as a physical inspiration to his organization. His habits, his conception of what it means to be a soldier, his self-abnegation, his indifference to camp discomforts bring to mind the first crusaders and the men of Valley Forge. A study of Colonel Howland is a study of his regiment, and the regiment reflects the hardness, stamina, and courage of its commander. Colonel Howland is a lineal descendant of the Puritan Howland, and it is his pride that the Puritan stock has remained without foreign admixture to this day. He was graduated from the military academy in 1895; his military advancement has been based upon worth. He was promoted to a captaincy in the volunteers for bravery on the field of battle in the Philippines, was selected as commandant of the Pacific branch, U. S. disciplinary barracks. He was commissioned as colonel in the present war and now commands the "Melting-Pot" regiment, the 343rd of the 86th division. He wears the treasury gold life-saving medal.

His physical characteristics, singleness and intensity of purpose, and his sympathetic understanding of human nature caused his election as commandant of the Pacific branch U. S. disciplinary barracks. Here, in the reclamation of deserters and military criminals—the flotsam and jetsam of the army—his influence over men made itself felt, and he was instrumental in restoring to themselves, to society, and to the



Colonel Charles R. Howland, N. A.
Camp Grant, Rockford, Ill.

army men who otherwise would have sunk into the submerged tenth; and more than 400 such reclaimed dishonorably discharged soldiers are now serving their government honestly and faithfully as soldiers—and most of them are noncommissioned officers, because of their being highly trained and efficient.

No regiment is stronger than its commanding officer. If he is a weakling, his official and enlisted personnel will lack stamina. He will find it impossible to weave the various and often discordant strands of humanity into a fabric that will stand the wear of a hard campaign.

"We are at war. This is war, not a picnic." These were practically the first words

I heard from the lips of my Colonel, and these words are the keynote of his life and of all his efforts and methods. He is temperate in all things; abstemious to an almost incredible degree. He neither uses alcoholic beverages nor tobacco in any form. He sleeps eight hours and works intensely sixteen hours. If he is to arise at 4 a. m., he retires at 8 p. m.; neither sleep nor work must suffer. Twenty-eight years of abstemious army-life have hardened muscles and will, and, if one may speak of intimate things of one's colonel, he wears B. V. D.'s summer and winter, the thinnest woolen socks, light-weight woolen O. D. uniforms and, even when the low record of 28 degrees below zero was reached, went to the



Captain Edward J. Abbott, M. R. C.
Camp Grant, Rockford, Ill.

range, the trenches, and on the all-day marches with no addition to his everyday garb, and without ear-coverings. To a protest uttered by one surgeon, he replied: "No man with rich oxygenated blood needs earmuffs; exercise sends warm blood to my ears. Like the Indian who replied, "Me all face," when expostulated with by a paleface for standing with bare feet on the ice, so Colonel Howland is "all face." He is a disciple of the "open air," and he and his men live, literally, in the open air; by day, in all weathers in the open, at night, in barracks immaculately clean and fully ventilated. He has practically made me a believer in a modified form of Christian Science, a believer in the victory of a reinforced mind and body over the rigor and malign forces of nature.

This hardness of body and mental for-

titude he has imparted to officers and men—the reenforcement of the minds and bodies of the men was a gradual process. The ordinary military methods were employed; setting-up exercises, drill, marches, regularity of hours, the pruning off of all habits not conducive to military discipline, and, above all, emphasis was placed upon the sanitary details of camp-life. Colonel Howland was, and is, cognizant of the minutest details of his men's life, daily routine, and equipment. The slightest deviation from the right in sanitary matters was visited with a punishment that sometimes seemed out of proportion to the offense, but, the justice of which was always recognized by the men. Not a few of the captains have been "on the carpet" in the ascetically furnished office of the Colonel and not only received stentorian "bawling-out,"



The Library at Camp Grant. A great influence for good and contentment.

but, also deprivation of leave of absence for a month because of some infraction of regulations that were for the health and morale of their men.

What Military Training Is Accomplishing

This brief sketch may seem a strange introduction to a psychological and physical study of enlisted men. One must remember that no regiment is stronger than its commander, that his characteristics stamp themselves upon his officers and men, and that headquarters is the great central power-plant from which radiates the regimental force and spirit. Colonel Howland has stamped his ideals upon his regiment; and the 343rd regiment of infantry can show what six months of intensive training can do for men who started with bodies and minds undisciplined in the military sense.

What is true of this particular regiment, is true in more or less degree of all others now in training and will serve to dispel many of the false rumors regarding the treatment and condition of enlisted men.

To understand fully the physical and

psychical revolution that has occurred, let us make a comparison of the past with the present and then explain the methods by which the miracle was wrought.

The draft was selective. The exemption boards, to the best of their ability, chose men whom they thought physically fit. The selectives, in the main, were good representatives of the manhood that cities and the "piping times of peace" breed.

Those who saw the motley crowd de-train at Camp Grant and pantingly drag themselves to the barracks scarcely will recognize the same men in the sturdy soldier, straight and hardy, able to take a twenty-mile march in severest winter weather, stand all day in the trenches, march through mud, slush, and rain, return to the barracks, and next day present the most convincing proof of efficient training, the lowest sick call of months.

Some Psychological Aspects

The problems of beginning training were purely sanitary. Their solutions were found in the enforcement of reasonable

sanitary regulations. The hardest work was to instil into the men a sixth sense—the "sanitary sense." Until one comes into contact with a large body of men separated from feminine influence and the social restraints of civilized life, one does not realize how quickly the savage comes to the surface. No one who has not been at the inception of a camp can conceive of the enormous task facing the company and regimental organizers. The men enter upon a new world—"the old things have passed away, behold, all things have become new." A new mental attitude must be taken, or, rather, must be instilled into the men.

An analysis of the mental attitude of the selectives will reveal chaos. The whole edifice of their lives has crumbled and for a

tion and disciplining of the new recruit is, the impartation of knowledge—military, personal, and sanitary. His relation to the fighting force as a whole is explained. His personal status, responsibility, and duties are expounded and vividly illustrated; and the sanitary details and regulations not only are issued and insisted upon, but, are painstakingly explained and shown to be, not



Top Sergeant Maloney, of the Infirmary. A fine type of a soldier.

more or less brief period they busy themselves in sadly contemplating the ruins of their hopes and take a melancholy pleasure in nursing their fears.

The predominant physical element is fear. Fear does not mean cowardice—possibly a better term would be "apprehension," which has its inception in the lack of knowledge of present duties and the facing of the unknown future.

Ignorance has always been a synonym for fear. So, the first effort in the educa-



The jolly cook of the Infirmary. He feeds the boys well and, likewise, himself.

only reasonable, but, for the good of the men, individually and as a whole.

Their's Not To Reason Why.

The mental attitude of the recruit is a raging battlefield. The hardest fight is against self-indulgence, not of vicious sort, but, that kind in which we all indulged in civilian life, doing things when we liked, as we liked, and only when we liked. The recruit has to learn to obey unquestioningly, to turn to the right or left, to stand still, to march, to sleep, to arise, to eat, to perform toilet-duties, not at his own volition, but, at the will of someone else; and, apparently, without reason, at least, to him.

For the average American, this is the hardest task. To fight, is the natural right of the American citizen. To work, he con-

siders his portion; to argue, a divine right. Therefore, to obey, without question; to grasp the fact that his part is "not to reason why," and is "but to do" at the command of someone—possibly younger, inferior in education and social status, but, su-



Kitchen Police. These boys will make good wives for some women—some day.

perior because of special commission—is the most difficult for the freeborn argumentative American citizen. Therefore, men in the American Army are not whipped into line, but are convinced. The camps are not training cages for wild beasts nor civilizing centers for savages.

"Melting-pots" they may be, and are, fusing the conglomerate discordant foreign elements into a harmonious whole, doing in



One of Chicago's pretty girls who makes the lot of the infirmary dentists more bearable.

six months that which twice six years of civilian life, with its segregation of each nationality, could not do.

The boys of foreign birth realize in themselves this awakening of the "American sense." One Italian in my company, in answer to a question, said: "Why, I go fighta da Kais? I tella you, he wanta maka me da European again. I American and fighta

da Kais, Cussa heem! because I lova da Unc' Sam and da American girl."

A Sanitary Sense Is Developed

The hardest thing to develop is, the "sanitary sense." By this, I mean a hygienic interpretation of the golden rule. A man does not want to use a dirty latrine, therefore, he will police carefully the latrine and not rebel when ordered to do that detail. He that does not like to eat contaminated food, does not relish meals served in dirty mess-halls, therefore, when he is "K. P.,"¹ he will work with energy; and will bear in mind that the hand that wields the scrub brush kills the germ. He is taught the fundamental facts of disease, and so, insists upon a separate latrine being used by a diseased soldier; he resents intrusion upon his private belongings, so, fights if his mess-kit is used by another. The cleanest man in the world is the well-trained, fully disciplined American soldier. He polices his barracks and



Log Cabin built at the trenches by a West Virginian mountaineer.

barrack streets, not, because he really wants to, but, because of his sanitary sense; and the place freest from flies, freer than the kitchens of the majority of my readers, is, the open-air field company kitchen. His sanitary sense is fully developed. The lines graven upon his mind by precept and example are ineffaceable, and he carries his sanitary sense into civilian life and employs it there.

One of the benefits to be derived from the training of the army will be, the utilization of this sanitary sense in family- and communal life. Public health and sanitation will be improved and loss of life in battle will more than be made up by the increased vitality and added longevity of

¹"K. P.", Kitchen-police.

those who eventually return to civilian life. I think, then, that among the greatest and most glorious victories of this war you will find numbered the conquest of disease and dirt.

Summing of a Questionnaire

A questionnaire among a certain representative number of the enlisted personnel of the regiment, in conjunction with wildly scattered inquiries among officers and men, elicited the following interesting facts.

1. That the men are satisfied with their treatment.

2. That their environment, the housing, heating, latrine- and bathing-facilities are comfortable and conducive to their well-being.

3. That their food is abundant, well-cooked, appetizing, and satisfying.

4. That the work they do, whether routine or special, is no harder than, and in ninety percent of the cases not as hard as, the work of their civilian life. The only men who are harder worked in the camp are the cooks, who have to hustle to keep up with the insatiable appetites of the men.

5. That the men have gained in weight. The men whom I personally investigated gained an average of 5 pounds; many have gained 12 pounds.

6. That the war risk allotment has removed worry and anxiety about the care of dependents; the war insurance and disheartening thought of a poverty-stricken, crippled future for self or reliance upon charity for the support of dependents in case of death.

7. That the war-risk allotment plan, coupled with the war insurance written upon the life of each man, has a marvelous psychical influence upon the morale of the enlisted personnel.

8. The clothing is ample, sufficiently well-made, and personally fitted to each man. In the 343rd regiment, each company commander personally fits the shoes to the feet of the men and is held responsible for all ailments of the men attributable to ill-fitting shoes. This is in addition to the rigid inspection which the regimental detachment official personnel makes semi-monthly. As a result, foot troubles are becoming rare and the long marches decrease rather than increase attendance at "sick-call".

9. The facilities for amusement, physi-

cal and mental recreation, are ample, wholesome, and satisfying.

10. The medical and hospital facilities and service are able, ample, and effective.

Out of 43,000 men, 23 have died since the inception of the camp—a record unparalleled in any city of that population. Many of these men died from disease contracted in private life, and which had developed either before or soon after entrance into camp.

In the regimental infirmaries, the men are carefully looked over, and I can truthfully say, from experience as a general practitioner in private life, that, if the applicants for infirmary treatment had to pay for service, 90 percent of them never would cross the barrack street for treatment.

Those cases which can be treated under the limited facilities of the infirmary—limited as to drugs and operative procedure—are given the careful attention of seven surgeons and physicians; and, in addition, the service of three competent dentists is at command.

Those cases which we can not treat, because of the limited nature of equipment, are sent to the base hospital. Here, are assembled specialists in every branch of medicine and surgery, and the patient is examined thoroughly, treated carefully and scientifically, and nursed during illness or through surgical convalescence by graduate hospital nurses.

The equipment of the base hospital, whatever it may be elsewhere—and I do not think that Camp Grant is any exception to other camps—is as perfect as can be. Linen is plentiful and clean, food likewise, and attendance is better than the patients receive in the private wards of many hospitals.

The one trouble that the line men find with the hospital corps is, that the latter are too careful with the patients and keep them too long.

Despite the hue and cry about inefficiency, lack of supplies, sapping of morale, spreading of epidemic, suffering from cold, and all that slanderous tongues can muckrake up, the new recruit goes on, growing in efficiency, physical and mental, developing military and sanitary sense, undergoing a psychical and physical revolution, becoming a man, upright and stalwart; so that, when he returns to civilian life, he will be a

potent factor in advancing the national interests and wealth.

Again let me say that upon the intelligence, energizing will-power, and comprehensive viewpoint of the commanding officer depends the morale and physical well-being of the enlisted personnel.

To sum up the results of camp-life, I can do no better than to give the words

of a private: "I never knew what it was, to live, before; as a civilian, I must have been asleep all the time. I have added ten years to my life. I know how to live. Believe me! When I get back into civilian life, I'll make those slackers hustle to keep up with me. War may be no picnic, but, so far it has been a picnic to me."

Would that it were never worse!

The Medical Detachment of a Regiment: Its Work in the Field

By W. F. VON ZELINSKI, M. D., B. Sc., Surgeon, 8th U. S. Field Artillery, Camp Wheeler, Georgia

WITH something like 14,000 doctors now in the army, it may seem at first glance that an article of this nature is superfluous, since those who are in the service are more or less familiar with the routine of the regimental surgeons' work, while those on the outside can have but little or no interest in it, not, probably, having any bearing on the problems of the individual civilian practitioner. Still, a large percentage of doctors have in the service sons, relatives or near-relatives, and many others may be interested in the methods of just how the "first line of defense"—strategically speaking—maintains the health of our troops. It is with these latter in mind and at the solicitation of the editor that this has been written.

At the outset, it is well to point out that the duties of organization commanders throughout the army are outlined in a set of regulations and these may be looked upon as the bible of the army. In addition to these rules, there are special manuals giving rules for the government of the medical, the quartermaster's, and other departments. The uninitiated who give but a cursory glance at these publications as well as the many special and general orders supplementing them, ninety-nine times out of a hundred give utterance to that much abused exclamation, "What an awful lot of red tape". Certainly, no one has a greater horror of, or shows greater disgust for, what this self-same "red tape" stands for than I; however, it may be remarked here that no organization of any consequence ever has been without some so-called red tape, and

that, when you find an organization that has little or none of it, you are dealing with "small fry".

The truth is, that that which is dubbed red tape in the government's service is called system in private concerns. Personally, I am a believer in the greater part of the government's red tape or, rather, say,



Regimental Medical Staff of the U. S. Field Artillery. The author stands second from the right.

the system of the medical department of the army; although it must be confessed that I am not a business man and my admiration may be based upon an ignorance of principles of efficiency or organization.

Duties of the Regimental Surgeon

The personnel of a medical detachment varies with the kind of organization they are serving. Ordinarily, it includes from four to six medical officers and twenty-three to forty-five enlisted men; the officers being supposed to be of the grade of major (one) and captains or lieutenants (three). The duties of a regimental surgeon are clearly and succinctly outlined in paragraph 634 of

the manual of the medical department, as follows:

"The Surgeon of a line organization is both an advisory and administrative officer (Par. 361).

"He commands the sanitary troops on duty with the organization.

"He is the advisor of the organization commander in medical and sanitary matters and, to the extent of his authority, is responsible for the execution of sanitary measures in connection with the organization.

"He provides care and treatment for the

by the commanding officer, the entire personnel of the organization in personal hygiene and first aid.

"He trains his subordinates in all departments of field sanitary work.

"He makes timely requisition for necessary supplies and equipment."

The details as to how the various duties are to be carried out is a matter largely left



Shoulder Litters. Litter drill is an essential part of the enlisted man's training.

sick and wounded and is responsible for the efficient performance of the entire sanitary service of the organization.

"He makes such sanitary inspections as may be necessary. In connection therewith, he supervises the water supply and its purification, the sanitation of kitchens, the disposal of garbage and waste water, the police of latrines and urinals and the filling in and marking of the same when discontinued, the police of bathing-places and picket lines, the measures taken for the destruction of flies and mosquitoes, and all other sanitary procedures necessary to preserve the health of the command.

"He instructs, at suitable times designated



Following the regiment into action "Maud" keeps right up with the procession, doing her bit cheerfully.

to the discretion of the surgeon. In our organization, we have arranged the work in departments, and, so far as can be judged, with good results. Each officer takes turn for a period of one week in holding what is known as sick-call, and here, again, we are guided by regulations of the "Manual



Sanitary Combat Train on mule back. This contains everything required to establish the regimental aid station.

of the Medical Department" (Par. 206), which says:

"Sick-call is not a suitable time for careful examination and treatment of the sick. Its purpose is, to determine as expeditiously as possible the number of men unfit for duty, so that the morning report of sick may

be promptly sent to the commanding officer".

Sick-Call and the Blessed S and W Card

We hold sick-call at 6 a. m., which is about one-half hour before breakfast. This time is chosen to prevent as much as possible having our time taken up by "gold bricks"—those fellows who are attempting to evade some duty on the plea of illness. The idea is, that, as between possibly having to gulp a dose of castor-oil and losing breakfast, the castor-oil alternative will not be given preference. Such applicants as seem



A 6-inch "hypodermic" for straffing Heine. Makes one think of "Twilight" Sleep.

to require detailed examination are told to return at a later time, when they are looked after by the officer of the day; a detail which is changed daily, so as to permit each medical officer, in turn, taking advantage of time off on holidays.

The officer of the day prescribes and supervises the treatment of the men. Whenever a man comes to the dispensary, he must have his name placed on the sick-report by one of his superior officers, the medical attendant then indicates whether the complaint disables the patient for duty and what disposition has been made of him; that is to say, whether placed in quarters or in hospital. Cases marked quarters as a rule are of the slightly ill and ambulatory kind. Those who are more severely ill are sent to the base hospital.

Now comes one of the most aggravating items of the day's work, namely, the making out of a sick- and wounded-card, or the S and W card, as it is more familiarly called. This is an innocent-looking card, about 10 inches long and 4 inches wide and having space for the entry of 26 items. I dare say that anyone who has to do with this form

and reads these lines will do so with mixed emotions. The principal detail-item is that of diagnosis. Difficult at best, the diagnosis seemingly is rendered more complicated by requirements of the existing regulation, which very plainly—or, as some would have it, very intricately—states just how this is to be carried out. I have heard more than one ancient in the service say that one can handle these cards for ten years and still learn more about their makeup. Blessed is he who possesses a good "Sergeant, First Class," whose every other deficiency may be excused if he can put through three or more monthly sick- and wounded-reports, hand-running, without having some of them returned, accompanied by a letter made up of divers aspersions on his mental capacity. For myself, I can say that the study and contemplation of this card is and has been a liberal education, and that day may be counted lost when something new concerning it has not been discovered.

The Division of Duties

In this organization, the labor has been divided so that each officer concerns himself with some certain phase of the professional work permanently, while the military duties are changed from time to time as circumstances warrant. Thus, one officer takes care of all the inoculations and vaccinations; he has a set time, usually Saturday, from 10 to 12 a. m., in which he performs these vaccinations. This time is chosen in order to permit recovery over the Saturday afternoon and Sunday from any reaction that may occur. The inoculations are made record of in our office and are noted on the soldiers' service records. These records are subsequently examined and checked. Vaccination and inoculation are required for all men under 45 years of age.

Another officer has charge of venereal cases, he prescribing and supervising all treatment, keeping an accurate account of each time that a man comes up for treatment. If a soldier fails to report for treatment or if it is discovered that a man has become infected and there is no memorandum of his having availed himself of prophylactic measures, it is reported to the commanding officer, with a request that charge be preferred for neglect of duty. All men having venereal diseases are restricted

to the confines of the camp as long as they are in an infective stage.

Also all men of the command are inspected twice each month for evidence of disease, especially venereal, and also as to their personal cleanliness and the condition of their feet. Men working in the kitchens or messes are inspected every week and those having venereal disease are not permitted to do work there, even though they have no open lesions.

Now and then special lectures are delivered, mostly by the surgeon, these covering personal hygiene, with particular reference to sexual diseases. Still another medical officer is detailed to visit the sick in hospital, to familiarize himself with the progress and treatment of the patients. The same officer also daily investigates the men's quarters, inquiring about the sanitary conditions and whether or not the men marked "quarters" are playing anything more strenuous than checkers. It has occasionally been found, for instance, that some men excused from even light duty, on account of illness, pass the time playing a corking good game of indoor ball. Also some men, while sick, have a fear of being sent to the hospital, and, so, do not report for treatment, but, manage to remain in their quarters without proper authority. More than one case of contagious disease has been discovered under such circumstances.

The opportunities for purely professional work in a regimental detachment are, to my mind, largely a matter of making the best of the material and facilities at hand, and illustrate what once was remarked about research-workers; namely, that some men can not begin work without a lot of apparatus, while others, such as, for instance, Professor Jaques Loeb, of the University of California (I think it was) can take a cigar-box and a piece of string and with this outfit make an important discovery. On the whole, though, I think we are better equipped than the average civilian practitioner and have, in addition, the facilities of the base hospital and its laboratories at our command for aid in diagnosis.

As the question of expense, either to ourselves or the patient, does not have to be considered, we are in a position to avail ourselves of every possible aid to diagnosis desired, such as cystoscopy, Roentgen-rays Wassermann test, and so forth. We en-

deavor to make an accurate diagnosis of every case and frequently consult with one another, while on occasions we call upon the specialists at the base. Twice a week, the medical officers convene for the discussion and examination of cases that present unusual features or are difficult of diagnosis; more particularly so when we wish to recommend a man for discharge because of disability.

In the matter of treatment, our facilities are limited to certain drugs and combinations, the amount and extent of which is specified by a supplies' table given in the manual of the medical department; and, while one can find the really necessary drugs and appliances, yet, to one who is accustomed to the facilities of a well-stocked pharmacy, that variety which makes for gunshot prescription writing is missed. However, as treatment is so much of an individual matter and, as one man will consider available material too limited and another can do most anything with opium, iodine, and aspirin, it would seem that the government has done a little better than striking a happy medium. A little ingenuity and a knowledge of pharmacy are of very considerable assistance in getting all the possible good out of what is offered us. The average number of patients treated per day is about 40, of whom perhaps not more than 6 to 10 are not doing duty.

Sanitary inspections of the camp in general are made by the surgeon himself. It can not be imagined that he is a very welcome visitor, as he "snoops" around in the kitchens, bath-houses, latrines, quarters, and other places with his little notebook in hand, jotting the things that do not please his sense of the esthetic. The jottings are handed into the commanding-officer's office, who in turn gives them to those officers having direct charge over the places inspected.

It may be remarked, in passing, that one gets splendid cooperation from the line-officers, who are surprisingly keen about such matters. It would seem that we have but one object in life, namely, to keep down the noneffective rate of a command to little or nothing. This consummation, devoutly to be wished, is aided and abetted by the division surgeon, who weekly publishes a bulletin showing the noneffective rate of each organization in the camp, as also a

burning ambition on our part to top the list with the lowest percentage.

While it is a source of pride that we have so topped the list on a number of occasions, there is yet a fly in our honey. Ours happens to be a regular organization, and, though 95 percent of the men enlisted about last June, though two-thirds of the officers are graduates of the training camps, our medical officers are, comparatively speaking, neophytes, and, despite some other factors not necessary to mention here, accomplishments are credited to the fact that this is a regular organization. Thus does a reputation submerge our individual capacities and crowns instead a tradition. Which very probably is as it should be.

The purely military part consists in equitation, foot-drills, setting-up exercises, and litter- and ambulance-drill for all enlisted men and officers to the extent of at least two hours a day. The enlisted men also are given instruction in first-aid, hygiene, bandaging, drug action, anatomy, physiology, nursing, and clerical and dispensary work. It must not be supposed that all this goes on without a hitch, for, as in Robert Burns's famous stanza, "the best-laid plans o' mice and men gang aft agley", so with

our work. A schedule of the week's work is shown herewith:

Daily: 5:45 a. m., first call; 6:00 a. m., reveille; 6:05 a. m., assembly; 6:15 a. m., sick-call; 6 to 6:30 a. m., police of quarters and arranging of bunks; 6:30 to 7:30 a. m., breakfast; 7:30 a. m., equitation, stables, police of infirmary; 3:30 p. m., water and feed animals.

Daily, except Saturday and Sunday: 10 to 11 a. m., foot-drill and setting-up exercises for enlisted men and officers; 11 to 12 a. m., lecture for enlisted men.

Daily, except Wednesday, Friday, Saturday, and Sunday: 1 to 2 p. m., lecture for enlisted men; 2 to 2:30 p. m., litter-drill for officers and enlisted men.

Wednesday: 1 to 3:30 p. m., march or pitching shelter-tents for officers and enlisted men.

Friday: 1 to 3:30 p. m., general fatigue for Saturday inspection.

Saturday: 11:00 a. m., inspection of men, equipment, and quarters. Afternoon, holiday.

Every night except Wednesday, Saturday, and Sunday, 6:30 to 8:00 p. m.: clinics and demonstrations at base hospital for officers only.

Impressions of Military Medical Service in the U. S.

By MILES MEDICUS, Somewhere in Camp

ONE of the surprises to a physician, after he has got beyond the stage of unfamiliarity with routine duties and of finding everything different from usual, is, the number of surgeons required for a given number of men, especially when one considers that the lay population, so to speak, consists of persons of the sex and age commonly regarded as least liable to disease, and with the defectives already weeded out. For example, 1 physician to every 600 or 700 laity—our peace experience for the last thirty years or more—has meant an overcrowded profession, working at the economic disadvantage of relative unemployment. On the other hand, the present military ratio is about 7 surgeons to every 1000 soldiers; and the experience in Europe

shows that a ratio of 10:1000 is necessary. Offhand, one would say that the explanation is either red tape or the maintenance of a staff up to the emergent requirements of a battle, with most of the time very leisurely occupied, or else that the surgeons, like the troops generally, are not actually at work, but, merely in course of training.

To a certain extent, these explanations are correct, although not to the degree nor in the critical sense that might be supposed. With the exception of the newest and youngest members, virtually the whole of the regular-army medical staff as it existed up to the declaration of war, the senior medical officers of the national guard, and a considerable number of the medical reserve

are and will be occupied with executive and clerical duties, and do not and are not going to deal with patients directly. At least 1 of the 10 surgeons will be thus occupied.

As to Red Tape

Anyone with no military experience at all will immediately suggest that such waste of energy should call for the cutting of red tape and the relegation of nonmedical duties to cheaper, nonmedical labor. One with slight military experience, such as the writer, is unable to offer a satisfactory explanation to the contrary; entering into detail, however, it may be stated that the management of a railroad demands the experience of a man who has the ability to serve as a conductor or engineer or in some similar capacity, and that the same general principle applies to the management of a large farm, a factory or a business of any kind.

Cutting red tape means just the same thing as dispensing with the ordinary, gradually developed methods of running any business. The more intimately one knows the military or any other business, the more he appreciates the folly of this criticism. Even if the exact reasons are not fully comprehended, we can not fill the place of the surgeon-general with a layman and liberate his personal services for inspecting latrines and draining and oiling swamps, nor can the high-rank, experienced men of the regular-army medical corps be set to work removing appendixes and applying Dakin's solution to wounds.

It is perfectly true that, as in private practice, military medical men are not literally overworked in ordinary times in cantonments. The staff, though, must be equal to the peak load of an emergency. For example, for three or four weeks, the writer averaged about sixteen hours a day, attending to about 50 patients, rapidly changing; he could not maintain this degree of economic efficiency for any long period, but, even in the slack times, he earns his salary at a far lower fee-schedule than pertains to civil practice, with the maximum allowance for failure to collect. In one camp, during an epidemic, until more help could be obtained, each surgeon had nearly 300 patients, and would, of course, give personal attention only to the worst cases.

Medical men in training, but, without actual patients, do not exist. The nearest

approach is in regimental surgeons and those in command of ambulance companies, and so forth. The former, even in cantonments, have a good deal of strictly medical, surgical, sanitary duties while the latter have enough to keep their hand in.

The executive, clerical, administrative, and commanding duties occupy something like 10 percent of the medical staff, or another 1 of the 10 surgeons per 1000 troops. Such duties as a rule are rotated or the men are called for consultation or advice in regard to strictly medical and surgical problems sufficiently often and with sufficient need to make their salaries seem small in comparison with the value of professional services rendered. In particular, the clarifying action of a regular-army surgeon, in an administrative position, called to consider some problem requiring decision as to malingering, proper disposition of a case, the conditions liable to develop from exposure, and the like, though interrupting his duties only for a brief time, may intensify greatly the economic value of the services of a professionally well-trained reserve officer without military experience. The attempt to keep the high-rank, regular-army surgeon in the operating-room or medical ward would be the greatest possible economic blunder.

As to Infectious Diseases in Camps

The fact remains, however, that, even without military casualties, except the occasional accidental shot-wounds, falls from horses, automobile accidents, and the like, the ultimate base-hospital care for troops in cantonments requires a staff of from 1 to 3 per 1000 men, averaging considerably more than the number of physicians in private practice to care for a laity of both sexes and all ages, without preliminary exclusion of defectives and diseased and, at that, not, by any means, occupied to the degree of securing an adequate employment and livelihood, on the average. In a base hospital, 1 surgeon per 1000 men in the command could just about do the amount of work necessary in a dull period; 3 would be required, working to the limit of endurance, in a busy season, and even this number would not be physically able to withstand the work of combined epidemics of moderate severity of several common infections.

This is a curious paradox, but, susceptible of explanation. In the first place, the

quarters properly provided for troops in training are not comparable in comforts with ordinary homes. Moreover, while in civil life, almost anyone can lighten his labor so as to conform to temporary diminution of strength or minor disability, this is not possible in military life. Home nursing and domestic medication that we must admit to be adequate for a considerable number of mild affections, though theoretically and occasionally practically dangerous by neglect of scientific medical care, are lacking. Hence, anything approaching a severe cold, bruises, strains, sprains, mild exanthematous attacks, and a great variety of minor affections that in civil life do not receive professional attention at all or, at most, call for but a single visit, demand hospital care; and it scarcely is necessary to add that reasonably thorough routine examinations and records of treatment could not be eliminated without violation of general rules of procedure and actual danger of serious results of neglect. In the aggregate, this group of cases necessitates a considerable excess of military over civil professional labor.

Another reason for the need of a large professional staff is, that camp life involves etiologic factors of disease contrary to our preconceived notions, which are based upon brief experiences in summer, with recourse to hotels or houses or breaking of camp if cold, rainy weather sets in, or which may be based on outdoor life in shacks on sanitarium grounds. No part of continental United States is, in any sense, tropical or even to be compared with that of the corresponding latitudes of western Europe, for which the Gulf Stream affords an advantage equal to 10 degrees of latitude. The past winter has been unusually severe, so that even the southern camps have subjected troops to degrees of cold such as 90 percent of them have never endured before, except for brief periods between the warmth and dry air of homes and places of business. To an extent scarcely realized, the men even have been in the habit of taking refuge in the homes of friends, in stores, and in every kind of public buildings whenever duration and intensity of cold made them uncomfortable. From the practical standpoint of acquired hygienic needs, fresh outdoor air is not an unmixed blessing and the toughening process considered necessary has, undoubtedly, led to a large amount of minor

catarrhal inflammations and has even predisposed to actual infections, such as pneumonia, possibly tuberculosis and diphtheria.

The incidence of what ordinarily are considered children's diseases, notably measles and mumps, and to a less degree scarlet-fever, varicella, and roetheln, has been as high as 1½ percent of the total strength of a division in a single week for measles, although after such an epidemic the incidence has declined rapidly and thereafter remained practically negligible. The same phenomenon, although on a smaller scale, has been observed for other exanthemata. As the troops represent about 10 percent of a normal fairly fixed population of both sexes and ages, a divisional cantonment of 20,000 to 30,000 corresponds to a city of between 200,000 and 300,000 population.

The question as to whether the occurrence of camp-epidemics of what are termed children's diseases is merely the result of aggregation of numbers may be answered, Yankee fashion, by another question. Given a massive epidemic of measles in such a city, should we have from 200 to 500 cases occurring in healthy male adults of between 20 and 30 years of age, and, presumably, an equal incidence among young women, and smaller but corresponding incidences among men and women of greater age? To combine the parts of the question, has any American city of 200,000 to 300,000 population ever had, in a single week, some 1000 or 2000 cases of measles among adults? Cantonments do not provide exhaustive reference-libraries, however, the question can, in all probability, be answered in the negative. If this answer is wrong, the popular and professional opinion, that measles and other exanthemata (excepting smallpox for peculiar reasons depending upon general vaccination) are rather rare among adults, should long ago have been corrected. The explanation of the occasional high incidence of the exanthemata, especially measles, among soldiers, may follow several lines. It is possible that the clinical diagnosis does not represent a single specific infection, or that the generally accepted belief, that, with rare exceptions, lifelong immunity follows an attack, is a mistake, or that these diseases skip an unrealized proportion of the upgrowing generation.

Whether these hypotheses be correct or not, the fact must be accepted—best expressed in rather oldfashioned terms—that

the virus of these contagious diseases is greatly increased by aggregation. On the other hand, the inevitable exposure to cold, which has been adduced as an explanation of the tremendous mortality of these diseases when introduced from Europe among the Indians and other aborigines formerly free from such infections, has not proved to be a serious factor. Neither is the generally accepted notion, that the exanthemata are especially fatal in adults, supported. The mortality for ten weeks, for about 750,000 troops (the number varying from week to week), was 14 from measles and 8 from scarlet-fever, none for the other exanthemata, the susceptible material being, apparently, nearly exhausted.

Importance of Repair Work

Another, perhaps the most important reason for the large number of surgeons required is, the enormous amount of what may be called repair work done. This involves several apparently distinct phases; however, it may generally be defined as professional care designed to remove, immediately, diseased conditions in the most extensive sense, which in civil life would be largely neglected, subjected to professional or lay palliative treatment, very gradually and not universally subjected to radical treatment, after years of more or less handicapping of efficiency, sometimes with spontaneous though gradual cure, sometimes with constant adaptation of the patient and his environment to the limitation of his disease, often resulting in spread of infection to others or to indirect handicap of the efficiency of others when the condition is not at all or not practically transmissible.

For example, tuberculosis: While this disease is on the decline, this diminishment is almost exactly that of the aggregate mortality, so that, as for many years, just about 10 percent of all deaths are owing to it. It is not surprising, therefore, that somewhere up to 1 percent of all troops, even after the preliminary and necessarily somewhat cursory examination, should, on thorough examination, be found to be suffering from this disease in some stage or to have suspicious degrees of exudation, or should develop active from latent foci under the stress of camp life. The great majority of this number—varying from a fraction up to 1 percent of the troops—are, by no means, in danger of dying of tuberculosis, espe-

cially when we consider that they are well on the road to recovery, well nourished, and thoroughly instructed in the means of cure and prevention by the time they are discharged from service as a precautionary measure before they might be subjected to exposure, including that of considerable contagion, in foreign service. Obviously, to go over an army with a fine-toothed comb to detect such cases, requires a disproportionate professional force, while at least one surgeon to a division is required merely to treat the cases detected and awaiting discharge.

The Venereal Menace

Another group of diseases logically included under the head of repair work, though not at first thought likely to be included in this category, is, venereal diseases. The vast amount of worry as to the venereal peril of military life, under present conditions, amounts simply to the fact that the sociologic ostrich has pulled its head out of the sand, taken a careful view of what confronts it, and has kicked hard and continuously and pretty effectually against the danger.

The venereal peril of military life has proved to be simply the peril carried over from civil life. Without entering into figures, the regulars had a relatively small initial venereal incidence in the fall, which has declined moderately; the national guard had a high incidence; the national army had a still higher incidence—which undoubtedly represented what our male youth has had for a number of years. All of these incidence rates have been reduced to about that of the regular army, that is, to the practical minimum under existing conditions.

Mobilization, instead of increasing, has reduced the venereal peril, in four or five months, to about a third of what it was. Moral prophylaxis has been given an efficiency such as it never could have had in peace; and this has required medical manpower.

However, quite aside from moral prophylaxis of the kind so pregnant with oratory and literature, or police prophylaxis, which starts with the female, there has been the military prophylaxis, which does not hesitate to appeal to a man's calculating intelligence as well as to his better nature and which literally pens him up till he is no longer a source of infection, and which, even with an occasional slip of the machin-

ery, scarcely gives him the chance to convey infection after accidental reinfection. Nor must we forget that, under modern conditions, venereal diseases are as curable as most other infections, even of mild type; allowance, of course, being made for late stages, which are incurable, even fatal within a short duration, although not markedly liable to transmit the disease further.

A third group of diseases under the general head of repair work includes chronic involvement of the appendix, hernias, actual or potential, various other really dangerous conditions commonly undiagnosed and untreated in civil life till the matter becomes emergent when it often is too late to save life. Of minor moment, so far as actual mortality is concerned, although not, by any means, without danger, are conditions such as flat foot, badly united fractures, hypertrophied tonsils, goiters, carious teeth, defective eyes and ears. All of these (and the entire list is much longer) not only require considerable man-power, but, they explain why the trivial complaints scarcely ever reaching the private physician at all require the seeming waste of time involved in careful examination and paper-work. This seeming waste of professional energy, as a matter of fact, is one of the most practical ways of raking over the youth of our country and of preventing ultimate serious disease and of removing handicaps to efficiency in civil as well as military life.

A fourth group of conditions properly included under the head of repair work, though, unfortunately, only to a slight degree in the literal sense of individual curability, is highly analogous to tuberculosis in regard to the amount of labor involved in finding the material. This group also well illustrates how ostrich-like our attitude has been in the past. Allusion is made to the detection of neurologic and, particularly, psychiatric cases. Nearly 1 percent of all troops come under the broader classification,

and the great majority of this percentage under that of congenital, unrelievable states of mental deficiency.

From the military as well as the humanitarian standpoint, it is worth the medical labor of detecting and excluding these unfortunates from military service. The still greater value of this work may or may not be achieved, according to whether local civil authorities follow up the work by placing defectives under supervision, differing in kind according to degree and individual circumstances. At least, the military service has, for the first time in history, thoroughly demonstrated the seriousness of the problem and has put it squarely before the civil authorities, to take it in hand or to continue to neglect it.

Without attempting the exhaustive—and to the reader the exhausting—task of enumerating all the reasons why the troops require so large a number of medical men, even before the actual traumatism of war occur, there is one further thought:

Granted that the males of military age (20 to 30 years) show, on the whole, the lowest mortality of all the population, do they really have the resistance to disease—and to death, though not immediately occurring—ordinarily ascribed to them? The writer has long doubted this idea of the high resistance of young men, and his military experience increases his former skepticism. It is no uncommon experience, either in civil or in military practice, to see the physician busy with the care of the sick, especially in epidemics of respiratory infections, when he, himself, is sicker than the average patient. It is probably no more characteristic of the military surgeon than of any other soldier, but, more conspicuous, because of the far greater proportionate number of middle-aged and even elderly physicians engaged, to note the greater "toughness" of the man decades older than the age-limit of the rank and file.

The Management of Measles

By C. M. HUNT, M. D.,^{*}Brevard,^{*}North Carolina

THE anxious parents ask, "What is the matter with our child, doctor?" "O, nothing, just a case of measles." And, then and there, the worthy Doctor of Medicine surrenders to the laws of gravitation his

saccharine substance—in classical language, he "drops his candy." However, the doctor should not lose sight of the fact that the diagnosis, treatment, and prognosis in a case of measles always are of vital impor-

tance, that frequently the disease is very serious and often fatal, and that even if in a given case it does not prove fatal, it often is followed by sequels that may affect the system for life, laying the foundation for serious and even fatal affections in the future; also, that the rash, of whatever degree, does not constitute the disease, but, that the attack is a serious systemic affection. Each symptom and condition should be diagnosed with care and skill, and each and every symptom be treated promptly as it arises, in fact, when possible, should be anticipated and met by prompt preventive treatment.

Many a little grave lies in the country church-yards, their little shafts glittering in the moonlight, testifying to "only a case of measles." Ah! and many larger graves containing the remains of the father or the mother of a family, surmounted by solemn, silent shafts, are the mute witnesses to the family's loss because of a doctor's "O, nothing but a case of measles."

The treatment of measles is to be selected according to the views and successful experience of the individual physician; weighing carefully all of the symptoms and taking into consideration the family history and the personal equation of each individual patient, considering each as a patient, not as a "case".

In my opinion, what follows includes a few of the important points to bear in mind. Of course, there must be a good nurse, a proper room, ventilation, medium temperature, and things of that kind go without saying.

Prevention of the Disease

Isolate the patient. Render his body as aseptically clean as possible. Keep the mouth, throat, and nasal passages sprayed with an antiseptic solution, repeated frequently. Keep all of the organs of elimination in an active condition. Keep the system saturated with calcium sulphide. I do not believe that anyone will contract measles at all, or if so, only in a very mild form, if the system is saturated, before exposure, with a good preparation of this drug.

I have heard from professional brethren, and fully believe myself, that an ideal method of keeping the nasal passages clean is, to use frequent (every one to two hours) sprays with chlorazene and to follow these

twice daily (night and morning) with a 1-percent spray of dichloramine-T-chlorocresane oil, so as to prolong the germicidal action, especially at night. Inasmuch as it is now acknowledged that measles is conveyed by the discharges from the nose and throat, this treatment should be ideal; and I believe that we are justified in expecting, and claiming, that it will arrest the spread of the disease.

The oldtime extemporized chlorine mixture [also called euchlorine] is an excellent local and internal antiseptic, in this and in all other zymotic diseases. Here is my formula: Take of chlorate of potassium, 40 grains; hydrochloric acid, 220 grains. Put these into a 16-ounce bottle and cork. When the fumes of chlorine begin to fill the bottle, pour into it 1 ounce of water, shake gently, then adding water till the bottle is full. Then cork tightly and keep in a dark place. (This mixture sometimes is explosive.) The dose for adults is from 1 to 4 teaspoonfuls, properly diluted.

Treatment of the Patients

First place the patient into a quiet room well ventilated, neither too hot nor too cold. Insist upon quiet—the nervous system is profoundly affected in measles. By this means, grave complications may be prevented, such as headaches, delirium, and meningitis, from congestion.

The care of the eyes is all-important. Give the eyes perfect rest, in a darkened room. Bathe the eyes frequently with a hot boric-acid solution during and a long time after convalescence. The eyes must receive watchful care and attention.

Fresh air is most important. Avoid draughts and cold irritating air in cold weather. Warm and tempered air in cold weather is just as healthful as cold irritating air and saves an unnecessary tax upon the sensitive air-passages and lungs.

Food should be carefully selected and given in proper amounts, at proper and regular intervals. Till the high temperature subsides, avoid solid food. We may give mutton-broth, Horlick's malted milk (avoid cow's milk at this time—as in all diseases where there is a high temperature), liquid peptonoids, chicken-soup, beef-soup, beef-extract made from a nice piece of beef (do not use the beef-extract in jars from the drugstore); later, butter, cream, grits, corn-gruel, corn, jelly, junket, milk (sweet

boiled) milk-punch, orange-juice, rice (well cooked), rice-gruel, squirrel-extract (i. e., an extract made from a squirrel, the same way that beef-extract is made). This is the best food for any sick child in all diseases, especially good in all bowel and stomach troubles. For irritation of the throat, the white of an egg, beaten up stiff, with a little sugar, is very grateful and nourishing.

Water should be cool and given frequently; to be boiled when there is the least suspicion as to its purity. When boiled, it should be cooled, using ice if necessary; but, it must not be given below an ordinary cool refreshing temperature. In all affections of the air-passages, avoid iced drinks, ice-cream, and the like.

Circulation must be equalized. Avoid congestion and stasis in each and every organ, especially the brain, lungs, and kidneys. The brain must be protected from congestion. If necessary keep the head cool by applying compresses wrung out of cold, even iced water, frequently changed, to prevent insomnia, delirium, congestion of the brain, and so on. The *temperature* should be kept down as near to normal as possible, but, must not be forced down to the extent of weakening the patient.

Bodily functions must be kept at a free normal pace. *Elimination*: I repeat that all organs of elimination must be kept active.

Coated tongue: Give small and properly repeated doses of calomel, followed the next morning by castor-oil and oil of turpentine.

Clean out. Clean Up. Keep Clean. For a collection of mucus in bronchial tubes and mucus and bile in the stomach, a few doses of a well-selected emetic will do great good.

Sequelae

Every case of measles should be considered a potential case of meningitis, pulmonary tuberculosis, or acute or chronic pneumonia—the latter of the areolar hyperplasia type. Here, the hepatized consolidated areas later become caseous, break down, cavities form, and pulmonary consumption develops even years after the primary disease of measles.

I once was called to treat a young man with a pronounced acute pneumonia in the right lung. Upon examination of the left lung, I found an old congestion, great dullness on percussion, consolidated areas, hardly any expansion. I called the patient's

attention to this condition and told him that he had suffered, for I did not know how long, from shortness of breath, undue weakness from exercise, and so on. He acknowledged the truth of my statement, and we counted back, guided by the symptoms and the length of time that they had existed, to two or three years, when he had suffered from an attack of measles. This lung was left affected by neglect of proper after-treatment. This lung gradually responded to treatment and cleared up later.

Keep the lungs and bronchial tubes as free from mucus as possible; do everything possible to prevent congestion and stasis; examine the lungs daily, also several times for a month or two after the patient seemingly has recovered. I repeat, examine the lungs carefully and frequently, to see if there are any congested or weak spots.

Institute counter-irritation of the lungs, in the latter stages of measles or during convalescence, when needed—and it is needed much more frequently than is generally imagined. For adults and large children, use mustard plasters, made of plain mustard and water. Do not add white of egg, flour or vinegar—the latter weakens the mustard. In an obstinate case, when mustard will not blister, use a fly blister. Open the blister, catch the serum on absorbent cotton, and apply a thin cloth dipped in melted hog's lard. Put on a fresh dressing before the first one gets dry and sticky. Blister repeatedly, if it is necessary to clear up congested areas. This also will loosen the phlegm and lessen the cough, if the patient is "left with a cough." For babies and young children, use a mustard poultice, made of mustard and flour 1 to 2 parts of the former and 3 or 4 of the latter. Make it strong enough to redden the skin deeply, and repeat as often as needed. Where the mustard has not been applied or in cases where it has not been needed, apply frequently to the chest and rub in well equal parts of camphor and mutton suet, and a little oil of turpentine, if desired. Never apply antiphlogistine over a weak lung, one struggling to pump the air in and out—the weight is injurious and often deadly. By the excessive weight, the air is gradually pressed out of the lungs and congestion favored. You will see and feel how it works if you will lie down awhile with a

grindstone on your chest and try to draw your breath.

Medicated air in bronchial troubles is very helpful and grateful to the patient. Select anything desired. One great plan is, to fill the room with the fumes from slaking lime. By so doing, great benefit will be given to all diseases of the air-passages, good in certain stages of measles, croup, and so on. The fumes are cleansing and antiseptic in effect. Take a lump of unslaked lime and put it into a big tin bucket containing a little water, or frequently pour a little water on it. If desired, the fumes can be collected and guided directly to the patient's nose and mouth, by using a large long funnel, or a paper horn, made by rolling a large piece of paper or several newspapers. Place the large end over the bucket and the small end near the patient's nose and mouth, avoiding holding it too near if the fumes are too strong or hot. Besides, the patient, nurse and lime-pan can all be covered tent-fashion, by throwing quilts around them.

Medication

I suggest as a few of the remedies that I have found useful in the different stages of measles the following: cough-medicines and expectorants, infant-anodyne granules, emetoid, apomorphine, specific medicine of lobelia, fluid extract of ipecac, ammonium iodide, ammonium chloride—to mention the more prominent ones.

To "keep the eruption out" and reduce fever: aconitine and sodium salicylate. Either one is good alone. Together they are synergistic. If the temperature remains obstinately high, substitute for the aconitine the defervescent-compound granules. When the aconitine and sodium salicylate are given, pilocarpine will not be needed for delayed eruption. Echinacea is good to give together with the calcium sulphide.

As tonics, give triple arsenates, nuclein, pure port wine. To sustain the heart, give cactin, strychnine, brucine. If for any cause during convalescence the patient is

very weak, apply pure warm corn-whisky (adults, one to two tablepoonsfuls every one to two hours), not enough ever to stimulate, but, small quantities frequently and regularly repeated; just enough to keep the strength up to a certain mark and help nourish the patient. Rub the whisky on the legs, back, and abdomen, all of the largest surfaces. I have known this application of whisky to keep an exhausted patient alive for four weeks with no food taken during that time, and a good recovery resulting. I have known it to sustain the heart and nourish a great many patients. This is a fact, though scientists and many doctors claim that it depresses the heart, that it is a narcotic, that it does not stimulate or nourish when used as a medicine.

For pains and aches in measles, give specific medicine of macrotys and bryonia.

Prevention of measles in the camp: When sent to the camp, quarantine each unit the proper time, to see if any are taking measles before they are allowed to enter the camp proper. All the same, these men are very liable to contract measles later. So, were I medical director, I should have each unit to be sent by each drafting board detained in a camp at home. I should expose this bunch of men to measles till they all, so far as possible, had contracted the disease, then would send the latter home for home care and proper treatment, till they recovered. By this means, we should be certain that the disease of measles would never be in the army, with its long death-list, troublesome care and treatment, quarantine, etcetera.

It can be properly objected that this plan would give the disease to some who otherwise might not have it. This is, or may be, true; but it would be doing the greatest good to the greatest number, at the expense of the few. And, it is a certain fact that, if we prevented this disease in all of the armies, thousands of valuable lives would be saved (and could have been saved), to say nothing of the inconvenience of this disease, the medical care, quarantine, and all else in camp.



On the Treatment of Morphine-Addiction

By H. E. GOETZ, M. D., Knoxville, Tennessee

OPIMUM-ADDICTION no doubt dates back to the introduction of this valuable drug to man. Many beautiful stories have been recited as to the discovery of this drug, one that I remember reading some years since having been translated from a foreign tongue, telling of a certain knight who visited India on a hunting expedition and the servants making his bed of the leaves of the poppy, which grew there in profusion. The pleasant dreams that accompanied the knight's rest caused him to return many times to sleep on the same kind of bed, and to bring along his friends likewise to enjoy it. Doubtless the story is a myth, but, somebody at some time discovered its narcotic properties and that it possessed the peculiar ability of pushing away the clouds and sending the taker into the arms of Morpheus in royal style.

Hippocrates undoubtedly used this drug in his practice and recommended it to others, and the medical profession today would lamely attempt to relieve many ailments without this valuable adjunct. China has been affected longest with the opium-habit, and most severely. In 1840, a Chinese diplomat declared that the opium traffic in China amounted to more, in dollars and cents, than did that of the shoes, jewelry, and silk of that great empire; and it was then that China undertook to deal with this traffic, since only a fraction of one percent of its population was not affected either directly or indirectly with this drug. The only source of opium being India, Great Britain objected to the Chinaman curtailing his use of the drug, and the diplomatic row that followed was a long one. Eventually, Great Britain, desiring to test the strength of the Chinamen, shipped into one of the ports a shipload of opium; whereupon the Boston Tea Party was re-enacted by the Chinamen, who threw overboard 300,000 dollars' worth of opium belonging to Great Britain. A war lasting seventeen years followed in which the poor Chinamen lost; being forced to pay an indemnity of \$300,000,000 and to continue the opium traffic. This ended

their attempts to do what England has now done and what the United States is doing in controlling a traffic which meant ruin to their populace.

However, the point that we are most interested in, as medical men, is, the treatment of the patient who has fallen into this habit. I regret that in the past this work has been left, in the main, to the quack and the charlatan. Since England recognized opium-taking as a disease, in 1856, quack institutions, in which opium-addiction was treated, have flourished all over the world, and especially in the United States, while it seems that the medical profession has not made any serious attempt to go to the bottom of this condition, recognizing it as a habit, which should be treated by will-power rather than as a disease with a fixed pathology, which requires medical skill to remove.

In the light of my experience in the past four years, I regard the vast majority of these addicts as curable, when handled intelligently under the system which I am about to describe. There is, perhaps, no disease known to medicine that has, in the past, been as unsuccessfully treated as has drug-addiction. I was recently handed a letter by a superintendent of an institution for the insane which had been written by the physician in charge of a well-known institution where drug-addiction is treated, and in this letter I read: "I have cured this man of the drug-habit no less than five times in the past two years, but, he persists in relapsing." And these continued relapses have caused the profession generally to regard drug-addiction as incurable.

A few years ago, when I became interested in this class of work, I visited the various medical centers in search of information on this subject, and I concluded that the field was one that promised much to the painstaking investigator.

I trust that you will pardon my criticising here of the treatment that I have investigated, and I first wish to speak on gradual reduction, which is doubtless the oldest system or so-called cure, and only to speak of it in condemnation. It is the

*Paper read before The Academy of Medicine of Chattanooga, Tenn., Nov. 3, 1916.

most inhumane of any of the treatments, in that the patient is never comfortable from the first marked reduction of the doses until the end of the punishment. Like the proverbial Dutchman who cut off the bulldog's tail an inch each day to save the dog pain, he found that the last cut made the dog howl the loudest; and so it is, as Mark Antony put it, the most unkindest cut of all. And it is just after this last cut that Erlenmayer has well described the condition of the patient thus:

"After the withdrawal (the patient) is left in such a condition of physical weakness and mental dilapidation as to be the victim of intolerable suffering and unfit for enjoyment or application to work. He can not sleep, he has no appetite, he often vomits, and he feels so much used up that he will not rise up in bed. His condition continues for a long time and grows worse from week to week. Various attempts at relief prove useless. Morphine is the only remedy."

My own experience would cause me to modify this authority's opinion by saying that his condition grows worse hourly, until the patient goes back to his former habit or dies from exhaustion.

The withdrawal of the drug alone by no means constitutes a cure; the victim being left helpless, with morphine yet in his secretions and toxins produced by morphine, due to its inhibitory action on the liver, spleen, intestines, and kidneys, and, further by numbing the centers in the brain which presides over the functions of the body—all of which renders him most miserable, so that he presents a picture which words are powerless to paint. His heart's action is bad; he is in a state of unrest; sleepless; his vision reduced; his appetite gone; hallucinations are present; leg and back pains are almost intolerable; and any disease in the entire category may be suggested upon him; and, unless his one panacea for all ills, namely opium, is quickly administered, death relieves him of his suffering.

I was interested a year or more ago in an experiment that was being conducted in a neighboring town by a well-meaning physician, who placed in jail fourteen opium-addicts, in order that he might control them while he administered the gradual reduction-system for their cure. I visited these patients with this physician at his suggestion, and found that at the end of two

weeks not one of the whole fourteen failed to lament at the suffering he had gone through with and avowed that they would go to their favorite drug as soon as released. Some months afterwards, I learned through this physician that they all had returned to their former habit. I do not mean to say that there have not been some cures with this system, for, I remember once reading in the Bible that three fellows were put in a fiery furnace and came out unscorched.

The Town-Lambert Course

Some years ago, there appeared in *The Journal of the A. M. A.* an article by Dr. Alexander Lambert, of New York, offering to the medical profession a system for curing drug-addiction, which he stated Mr. Charles B. Towns, of New York, to be the author of. This treatment is pretty well known to the medical profession, and consists in the use of atropine. However, the formula indicates tincture of hyoscyamus and belladonna with xanthoxylon to be given in hourly doses. Compound cathartic pills are administered, with blue mass, and also large quantities of the drug to which the patient is addicted.

I tried out this treatment clinically, following most minutely the details as laid out in Doctor Lambert's article, together with the information that I had gathered from a visit to the Towns Hospital in New York. I signally failed in every case that I undertook, dismissing the victims at the end of the period with apologies for the ordeal through which I had put them, and returned the fees which had been advanced. I observed that this mixture of belladonna and hyoscyamus produced violent delirium in most patients, since atropine is not as rapidly eliminated from the system as one might gather from the authorities. This delirium superinduces exhaustion, which is materially added to by the hourly disturbance of the patient for five days and nights in the administration of the drops, together with the drastic purges. At the end of the period, the patient is exhausted and presents the usual picture seen in addicts where the drug has been withdrawn; and it is just at this point where Dr. Lambert advises us to administer 2 grains of codeine. Remarkable advice from so wise a head! The only portion of this treatment that I can recommend is, the purging (with a modifi-

cation); for, if relief has come to some patients by this treatment, it is due, I believe, to this latter feature.

The Sceleth Cure

A more recent treatment that has appeared in the columns of the *Journal of the A. M. A.* is that of Doctor Sceleth, of Chicago. Published formula, which he says is the "essence" of the treatment, contains scopolamine, pilocarpine, dionin, (ethylmorphine hydrochloride), alcohol, water, and cascara. In discussing this treatment, Doctor Sceleth tells us that "scopolamine is one of the atropine series, and in so far as atropine is the physiologic antidote to morphine represents the specific element of the treatment." Just how far this drug is the antidote of morphine, we are not told. Like a great many other drugs, the action of the same is assumed by a great many physicians, because "somebody said so," without ever taking into consideration clinical evidences that would prove beyond a doubt that the action is not what it is laid down. And so it is that atropine is not the antidote to morphine.

Both atropine and morphine produce dryness of the mouth. Both are capable, under certain circumstances, of stimulating the heart. Both are cerebral stimulants and are capable of producing delirium. They are opposite in their action on the pupil, which matters little or nothing to the welfare of the morphine-patient. On respiration, both are dangerous depressors, while in Hare's, we read as follows:

"Atropine is a stimulant to the respiratory centers in ordinary amounts"—[mark you, ordinary amounts, not amounts necessary to impress a drug-addict], "but, recent careful study shows that its high reputation as a respiratory stimulant is not based either on clinical or experimental evidence. In many cases, it fails to impress respiration at all. It is inferior in the treatment of opium-poisoning to caffeine and strychnine."

I know good instructors who teach their students that it is positively murder to administer this drug in acute morphine poisoning. The administration of any of the atropine group, be it scopolamine, hyoscine, daturine or atropine itself, in opium-poisoning, either acute or chronic, is irrational, and treatments of opiumism depending upon this drug for their cure or relief should be

classed with that with liquozonc. Pilocarpine, another of the ingredients of this formula, is also a respiratory depressor, and, as all addicts are quite likely to have depression of this character during their treatment, its administration in any marked quantity will be contraindicated; and, surely, in quantities sufficient to produce diaphoresis, would be a dangerous procedure. Edema of the lungs is a frequent complication where much of this drug is given, and in addicts, where the vitality is always lowered, this complication is an ever apparent one.

Ethylmorphine hydrochloride, as the name suggests, is a derivative of morphine, and, if given in sufficient quantities, will stop pain, produce sleep; and, in fact, has the same action as morphine. I have substituted it many times for morphine in all forms of opium addiction, with the same satisfying effects. In speaking of this drug in the formula, Doctor Sceleth tells us that "the patient receives four grains of dionin a day for the first six days * * * which serves merely as a substitute for morphine," and in the same sense as corn-liquor would for rye-liquor.

And further we read: "It may be remarked at this point, in reply to possible adverse criticism, relative to the giving of one habit-forming drug as a substitute for another, that the administration of dionin for nine days (in diminishing doses during the last few days) is insufficient to cause a new habit and that such contingency actually does not arise." This is about the only point in the treatment upon which the Doctor and I agree. No "new habit" would likely arise, since it would only be a continuation of the old one. Opium is opium, and opium-habit possessed the patient in the beginning as it would in the end.

A little further in this astonishing statement we read: "By the fifth day, as a rule, the patient's desire for morphine is gone." It is not likely that an addict full of dionin would want morphine any more than a drunk full of whisky would want cognac. In speaking of the results obtained under this treatment, "the only abstinence-symptoms of any importance (are) insomnia, vomiting, and diarrhea." Enough of these two will place a patient where treatment for morphine-addiction is unnecessary. We would consider a patient with

either of these in a relatively serious condition, and, if he had all three, the outlook grave. On this point, the Doctor says further, that "the vomiting and insomnia which occur more or less constantly are not due to the scopolamine mixture, but occur in any treatment." I wish to take exception to this statement most positively. These symptoms never occur in our patients under the treatment as we administer it, and we feel that, if we could not conquer insomnia first, that the treatment would be of no avail, as any patient suffering from this affliction is doomed to take up some habit-forming drug to induce sleep.

Of the remaining ingredients in the formula, namely, cascara, alcohol, and water, I will remark that the habit-forming properties of alcohol are too well known to admit of any discussion; so that in my estimation, the only commendable ingredients in the formula are cascara and water, which, if given in quantities sufficient, are good eliminants.

Of the six drugs mentioned, three are well known to be habit-forming, namely, ethylmorphine, alcohol, and scopolamine. Scopolamine and pilocarpine are dangerous depressors to the respiration; indeed, on the whole, the treatment appears so irrational that I have varied my rule and not given it the clinical trial that I have the others.

About Luminal

Before taking up the treatment which we have so successfully administered during the past three years to drug-addicts, I will briefly describe the drug luminal. Luminal was first offered to the profession of this country through E. Merck, as a German product possessing the usual chemistry, which means little to the practicing physician. We are told that it belongs to the urea group. What I know of it is that it is a white crystalline powder with a disagreeable taste, and is insoluble in cold water. It is cumulative in its actions, and a dose given may not be effective for some hours following. In therapeutic doses, it does not depress the heart nor respiration. In about three or four percent of my cases, a rash appears, which very closely assimilates scarlet-fever. This rash must not be looked for unless the drug has been given for a period of several days. Some of the German authori-

ties regard this as a toxic symptom, yet, I have not seen any bad results follow. If the patient should become thoroughly narcotized, it means that elimination should be resorted to promptly. I have known of no death from this drug, still, it is better to stay on the safe side. The proper selection of the patient whom you are about to treat for morphine addiction means much to one's future success.

As Practiced at the Goetz Institute

Not every patient who comes to our hands with the simplest diseases can be permanently relieved. Morphinism is, by no means, a simple disease; I regard it as one of the most complex diseases, and, therefore, we must select cases properly if we hope to cure. The worst barrier to a cure is any chronic disease painful in character. The next in importance is, heart-disease, and then certain forms of tuberculosis. I have considered Bright's disease a contraindication, and in some stages it certainly is; still, we have successfully treated many addicts thus afflicted. Old age, of itself, is not a barrier, but, old age plus any organic disease would be a barrier.

When we are assured that our prospective patient has no disease that will preclude treatment, we begin with the administration of any good cathartic in reasonable quantity at bedtime, following it up the next morning with a liberal dose of magnesium sulphate. I have, heretofore, recommended large doses of calomel, blue mass, and compound cathartic pills, but this I find not only is unnecessary, but, in many cases, produces extreme exhaustion. While elimination is very necessary, it should be done in reason.

As soon as the bowels have moved thoroughly from the magnesium sulphate, we administer from 2 to 4 grains of luminal; and this we repeat every six hours until the patient is quiet and will sleep if allowed to. The narcotic he has been in the habit of taking is in the meantime administered in the usual manner, or the manner in which he is most accustomed to taking it, and the ordinary dose for him. The patient is kept in this sleeping condition by the administration of the luminal in quantities sufficient, care being taken not to give too much nor to give the dose too fre-

quently, lest we get cumulative action. There is no set time for the withdrawal of the narcotic. We usually withdraw on or about the third or fourth day, and get it all off at one time. The patient is kept in a sleeping condition, usually, for about a week, sometimes a little longer. Of course, he is fed during this period, and, if the luminal is administered correctly, the patient never becomes so thoroughly sleepy that he can not be aroused for meals or to attend to the ordinary functions. The magnesium sulphate should be kept up for some days after the luminal is discontinued.

Electric-light baths will also assist in the elimination, which is necessary, since morphine is found in the urine as late as nine days, and in the liver, brain, and kidneys up to the fourteenth day after the morphine has been discontinued.

During the reconstruction period, good food, exercise, shower-baths, massage, and some form of amusement assist in bringing the patient to a prime condition both mentally and physically, both of which are necessary for an ideal result.

Worth Remembering

In treating drug-addiction, let it be remembered that scopolamine, hyoscine, and atropine are habit-forming drugs when given in combination with morphine; that we frequently meet addicts who are fixed in their habit to these combinations and refuse to be satisfied with opium alone; that hyoscine or scopolamine or daturine, or any analogously acting drug, when given in quantities sufficient to impress a morphine addict, will also produce delirium and frequently dangerously depress respiration and heart action; that, chemically, hyoscine and scopolamine are the same drug; that no cure for drug-addiction requiring a patient to remain in the institution less than four or six weeks will relieve your patient of addiction; that the use of opium in any form, substituting for another form of opium, in the treatments of these addicts is a fallacy and results in nothing more than in switching your patient from one track to another, and, to carry a patient through the withdrawal period with heroin or dinonin, not only is unscientific and devoid of reason, but, criminal; that belladonna or any of its kindred alkaloids will not cure opium-addiction, nor are they antagonistic

to opium addiction; that the treatment of these patients outside of institutions equipped for this work is, in the main, unsuccessful, and treatments that would relieve your patients where properly handled would fail when left to be administered by friends or family at home. That all opium-addicts should be regarded as physically and mentally diseased individuals, and that they are entitled to the sympathy of their friends and their physician in the same degree as any other afflicted person; that the home treatments that we have examined depend upon opium in some form for their satisfying effect upon your patient.

In closing, I make a plea for ethical institutions in this work. I regret that the medical profession has, in the past, been prone to take "printers' ink" as their guide in recommending their patients to institutions for treatment. Quacks have flourished throughout the country and have gulled the addict, and are successful only in continuing the unhappy addict in his habit. I sincerely trust that, in the future, more stringent regulations will be enforced by law on all institutions handling this class of work, and that their work be supervised and inspected by proper authorities; and, to this end, I recommend legislation.

[The reading of this paper was followed by a discussion in which several members participated, who spoke substantially as reported below.—ED.]

Dr. Campbell: Doctor Goetz is too modest to tell you of the results of his treatment. I will tell you some of what I have been seeing every day for the past year at his institution. Undoubtedly, his treatment is most wonderful. I have not known it to fail to cure every patient since I have been observing it. It is the only treatment for morphine-addiction that I have ever seen cure at all. For years, I have been treating these addicts at an eastern hospital and every one that I have handled there during the past twenty years, with a few exceptions, has returned to the drug. I remember one man whom we kept six months and who left the institution voluntarily on a rainy day and immediately obtained a supply of drug and began taking it again. We used mostly the gradual-reduction treatment. I have seen many of these patients we treated at an eastern hospital since cured by Doctor Goetz. His treatment seems to remove all craving for the drug. I have seen and talked with many of these patients who were treated a year or more ago, some two years or more ago, and who undoubtedly are cured and are enjoying good health. The treatment has no

bad effects so far as I can find. The patients do not suffer; they seem to be normal in every way, and certainly those that I have examined closely during the treatment in all stages were in splendid condition—heart action and respiration normal all the while. I have no criticism to make of the treatment; I think it the best treatment known to medical science. I say: All honor to Doctor Goetz for his untiring efforts for these unfortunate people!

Dr. McQuillen: Will Doctor Goetz tell us whether morphine-addiction is the only field in which he has used luminal?

Dr. Williams: I would be glad to have Doctor Goetz state the percentage of cures that actually remained off the drug, and whether there have been any relapses.

Dr. Harrison: I have known this work of Doctor Goetz's in a general way for many months. It is an excellent work, and it seems to me that the hope of the drug-addict lies in this treatment.

Dr. Goetz: Luminal is not on the market any more. We have a supply on hand, which we hope will last us until some more can be brought over. It is made in Germany. Literature on the subject can be had at Merck's. I have used it in many mental and nervous cases with excellent results. I mention insomnia, acute mania, alcoholic delirium, manic-depressive insanity. I have controlled severe attacks of trigeminal neuralgia with it.

I have not as yet treated ten so-called repeaters or relapses, and I am now in the fourth year with this treatment. We have made it a rule to follow up our cases as closely as possible, and I am sure that more than 90 percent are permanently relieved. Of a given number of cases referred by the Associated Charities of Knoxville, all unfavorable risks, we cured all. One afterward died of Bright's disease and one returned to his former habit after remaining off the drug for seven months.

I have been asked my opinion as to the

effect of the Harrison Act on addiction. I hope my hearers will understand my position. This law has made business for every institution engaged in treating addicts, but, in the main, has not relieved the situation. It has been the means of murdering many of the pauper addicts, and some of the others as well. Those who have been unable to buy the drug or take treatment have died; others have been frightened into taking the treatment when they were not fit risks, and they, too, have died. Undoubtedly there should be restrictions on the sale of all narcotics, but, this law, and principally the rulings of Commissioner Osborn, have worked havoc. While I speak of the rulings of the Commissioner, I would mention that Prof. T. D. Crothers says that we must treat by gradual reduction. You have heard my criticism of this method, and I say again that gradual reduction is most inhumane and unscientific, and I do not believe that the courts will uphold the Commissioner in this ruling, which completely removes from the physician the choice of treatment. Perhaps the Commissioner is not acquainted with other forms of treatment, since Keely, at Greensboro, North Carolina, uses, as I understand, only gradual reduction-treatment with hyosine knockout—the Commissioner of Internal Revenue being at the head of this Keely Institute.

This law has forced most of the addicts who have money to pay for treatment into some institution. They have gone from one to another, seeking relief, but, which they did not find. Most of the cases we have treated have had from one to twenty-four treatments—the vast majority as much as five to ten. One patient had twenty-four treatments in nineteen years and, according to his statement, had never been off the drug habit during that time. He stayed in one institution for fourteen months, without a cure. He has now been off the drug for two years and is in splendid condition and pursuing his profession in the city of Knoxville.

A Typical Case of Pedunculated Median Prostatic Tumor

By G. FRANK LYDSTON, M. D., Chicago, Illinois

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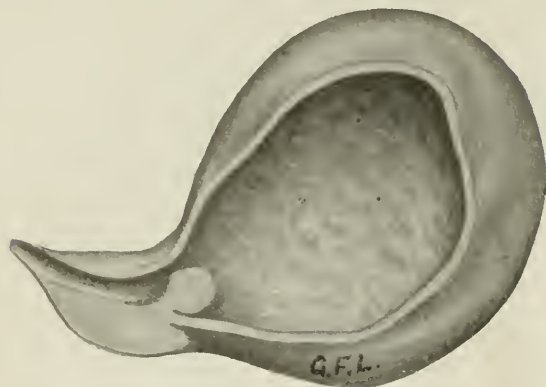
TO the general practitioner, who perforce is compelled to rely upon the clinical history of the case and upon rectal exploration for the diagnosis of prostatic obstruction, cases like the following are instructive, particularly as emphasizing the value of the cystoscope.

Case: Patient, aged 58, carpenter. Always well until about two years and a half

ago, when he noticed a little obstruction to urination, with hypogastric and perineal fullness and uneasiness and increased frequency of micturition. These symptoms gradually increased, with the added discomfort of sudden stoppage of the stream during micturition, especially on straining. This particular symptom could be avoided by urination while lying upon the back.

Several attacks of retention had occurred, the bladder finally becoming infected.

Examination per rectum showed an ap-



parently normal prostate gland. Cystoscopy, however, disclosed a smooth pedunculated tumor as large as a walnut, originating in

the posterior median portion of the prostate gland. There was the usual appearance of chronic cystitis, moderate trabeculation of the vesical wall, and a residuum of a little over three ounces of fluid. The patient's condition otherwise was normal. Suprapubic cystotomy was performed and the tumor removed, by slight force, with the index-finger. The growth was literally "wiped" off the vesical neck. The usual drainage was instituted. Recovery was uneventful, micturition being normal by the end of the third week. The urine cleared up rapidly and within six weeks was normal. The tumor proved to be simple adenoma. The "ball-valve" action of such tumors is readily understood.

Skin Diseases in the Army

By B. SHERWOOD-DUNN, M. D., Paris, France

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THE diseases of the campaigning soldier differ considerably in nature and frequency from those of times of peace. Making a tour of the dermatological clinics of the Paris hospitals before the war, one would encounter, as the most frequent forms of dermatosis, eczema, itch, psoriasis, and tuberculous troubles under lupic or verrucose forms. Today, eczema, tuberculids, and itch are rare, being replaced, in order of frequency, by phthiriasis, ecthyma, and trichophytinous diseases, and these frequently marked by varied peculiarities.

During the winter months, what was at first termed frozen feet, but now is called trench-feet, frequently appears. Also, various forms of artificial dermatitis, following unusual expressions of impetigo of the face and sycosis of nonparasitic origin, the subnasal form being particularly frequent. The tuberculides and tuberculosis of the skin are rare. Army Surgeon Milian states that he has seen but one case, and that of the verrucose variety, and no lupus whatsoever.¹ This is not astonishing when one

is acquainted with the rigorous care with which tuberculous subjects were eliminated by the medical examiners.

The army life and exercise in the open air and the nourishment, good in quality and quantity, have greatly counteracted development of mitigated forms of tuberculosis of the skin.

The rapid form of pulmonary tuberculosis has made its appearance from time to time; the chronic form, however, has been notably less frequent than in times of peace. For the same reasons the vesicular forms of eczema are rare.

Phthiriasis has been the disease most common, and chiefly in the acute form, the form so rarely seen in ordinary times. Often the invasion of the parasites is so sudden and so numerous that nearly the whole body will be covered by small edematous papules of the size of a pinhead, almost urticarian in appearance. The papules of excoriated prurigo, with their small black-brown crusts habitually seen in phthiriasis, are the exception. Equally rare is the melanodermy common to chronic phthiriasis. One particular region not

¹ Dr. Milian, *Paris Médical*, May 6, 1916.

mentioned in the textbooks seems to be the favorite site of this acute form which follows the army, and that is the posterior border of the axilla, where the undershirt comes into almost constant contact with the skin; whereas itch ordinarily is found upon the anterior aspect.

The sudden invasion and early care of these cases confined them to the acute manifestations; but, with the more prolonged and exacting service that has attended last summer's campaign, the papules of excoriated prurigo and melanodermy are beginning to appear. Another peculiarity attending this phthiriasis among the soldiers is that they almost constantly present an ethyma of the legs, and that under a curious form. On the anterior surface of the thigh or side of the leg, or both, there will appear, in groups of two or three, bright-red streaks of the width of a finger and four to six inches in length and resembling a Thiersch graft. They resemble artificial wounds and seen for the first time occasionally have been mistaken for voluntary mutilation; but, the parallel lines, perpendicular, and at a point reached by the hand without effort, marked them as the result of scratching with infected finger nails. They were readily healed by means of antiseptic applications.

Itch has been met with much less frequently than phthiriasis, and when seen usually could be traced to venereal contact being almost wholly confined to soldiers arriving from barracks or returning from furlough or from convalescence. In one or two cases, they acknowledged the sexual contact, but, only rarely will the common soldier admit that he has been with a woman, especially when he has contracted any sort of disease. It seems that the men do not catch itch from each other under ordinary conditions of campaigning, that is, clothed and sleeping side by side in straw or on the ground.

Several articles have been published in the French medical press calling attention to the recrudescence of psoriasis observed among the soldiers, resulting from nervous shock, violent emotion or traumatism. Following the destruction of the "Jèna," one of the soldiers had hospital treatment for a sharp attack of psoriasis resulting from the violent emotion produced by the explosion. A young soldier of 22 suffered an

attack, which appeared generally distributed over the whole body, immediately following his first charge upon the trenches of the enemy. Another soldier, 28 years of age, had an eruption of this disease, generally distributed over the trunk and arms, following the explosion of a "marmite," which knocked him down, but, produced no wounds. In another case, very similar to the foregoing, the man, 38 years of age, was treated in the St. Louis Hospital at Paris. A young woman of 25 presented this eruption immediately following the bombardment of Arras, where she lived.

All, excepting the one last mentioned, gave histories of tuberculosis in their family. A number of cases of this disease have been reported following wounds.

At the beginning of the war, at Verdun, 5,000 or 6,000 head of cattle were housed in crowded quarters, to furnish meat to that vast entrenched camp, and the soldiers in charge of the cattle were attacked by trichophytis, which appeared generally all over the body. During the winters of 1914 and 1915, the disease appeared, in suppurative form, in the beards of the cavalrymen, with voluminous crusts—a form difficult to cure. It spread to the artillery and all branches of the service where the men came in contact with the animals in question.

Trench-Feet

Trench-feet is a new disease. At the beginning of the war, as the men came into the hospital suffering from this disease, they were classed as frozen feet, as the malady appears most frequently during the winter and it was supposed that the cold had much to do with causing the trouble. However, it was soon learned that many men were afflicted under circumstances where cold played no part, and then the designation trench-feet came into use, as indicative of the origin of most of these cases. The physical signs are always the same; namely:

The balls of the great and second toes are swollen and edematous; the skin is distended and glistening; sometimes vesicles form, like blisters. The edema may extend to the remaining toes and ball of the foot. In grave cases, the liquid in the vesicles changes from citron-colored to hemorrhagic, and the skin becomes blue-black,

livid, and gangrenous. The patient complains of lancinating pains, which interrupt his sleep, and he walks with difficulty, oftentimes walking on the heels and elevating the toes. The pain is produced at several points, chiefly by pressure upon the head of the metatarsal bone. In the lighter forms, the patient complains of a feeling of fulness in the affected members, which may proceed to a condition of anesthesia, a feeling that the toes are "dead." The lightest form is characterized simply by pain and paresthesia. The trouble appears, as a rule, after the usual period assigned in the trenches and manifests itself when the soldier has retired to the rear for a rest and removes his shoes for the first time in several days. The affection lasts for two or three weeks in the lighter and for from one to three months in the severer cases.

Trench-feet are found chiefly among the men from 20 to 30 years of age. A sojourn in the trenches for at least three days is the chief cause of the affection. This is proven by the fact that those connected with the artillery, who are free from this duty, are not subject to trench-feet. The mud of the trenches is particularly favorable to its development. The constriction of the foot in the shoes for several days and lack of cleanliness play an important role in its causation; still, the exact nature of the malady is yet to be determined. Cold is not generally accepted as the cause, for the reason that it frequently occurs when the temperature is above the freezing point (de Massary). By some, neuritis, due to the humidity, is claimed as explaining the lancinating pains and the analgesia.

A general circular issued by the chief medical inspector-general of the army states that according to Raymond and Parisot the affection is of a microbic origin. The supposititious infectious agents have been isolated from the mud of the trenches by these authors, who have reproduced in animals the various evidences exhibited in trench-feet. The microbes, gaining entrance through the shoes, are believed to penetrate into the feet around the borders of the toe-nails or excoriations caused by the rubbing of the shoe. Complications frequently accompany the malady, such as abscess and lymphangitis. Tetanus has been observed with sufficient frequency to cause all patients arriving in the hospital

to be injected with the antitetanic serum. This cannot be done too promptly.

The treatment consists in frequent bathing in warm water with green soap, and local antiseptic applications. The toes are exercised daily by flexing and extending them. At night, the foot is enveloped largely in soft cotton wadding and a cradle placed over it to protect it from the weight of the bed-clothing.

Burns

Among the many atrocities invented and practiced by the Germans in this war, none has caused more agony of suffering than that of air-projected flames, flaming liquids, and shells scattering burning liquids when they burst. I never can forget the pitiful and heartrending sights brought before me, during my service in a front-line hospital, from these causes. The flaming liquids brought to bear at short range burn up the clothing, integument, and flesh as snow melts before the sun, and until one of our army-surgeons happily discovered a helpful combination little could be done to relieve the agony of the victims. I here give the composition of this antiburn wax*:

Sodii naphtholi	2 Grams
Olei thymi	3 Grams
Olei origanii	3 Grams
Olei geranni	3 Grams
Vasellini puri	1,000 Grams
Paraffini (45-50° C. m.p.).....	5,000 Grams

As soon as possible, every burnt area is carefully sponged with warm water liberally sudsed with green soap, being careful not to break the blisters or denude the parts, then cautiously dried with tampons. The parts now are covered with a single layer of sterile gauze, and this is painted over with the wax, which has been melted by placing the container in water of a regulated temperature. It solidifies as fast as applied. Over this coating, put another layer of gauze and again paint with the wax, and so on until several layers have been applied. Finally, cover with absorbent cotton and bandage lightly. The dressing is renewed each day, the wax covering peeling off readily without causing pain and without disturbing the healing surface underneath. Clean the surface with great care, so as not to denude or break blisters,

*This paraffin-wax preparation, known as *Ambrine*, is obtainable in the American market under various designations, one of them being *Parresine*.

and special care must be exercised not to disturb new skin formations.

When the inflammation subsides and the parts no longer require this application, then powder the parts with the following preparation:

Powdered camphor.....	20 Grams
Sodium borate	200 Grams
Powdered talc.....	200 Grams

Do not be disturbed by the copious formation of serous liquid or pus—the granulations will appear underneath and the healthy repair proceeds.

From the very first application, all pain ceases and the patient is comfortable. I have seen recoveries in most awful cases, in which the victims would have died in twenty-four hours without this treatment.

Observations on Rectal and Fractional Narcosis

By E. H. F. PIRKNER, A. M., M. D., New York, N. Y.

THE desirability of securing trained anesthetists is apparent, not alone in hospitals, but, to any practitioner who does occasional operations which can not be done under local anesthesia. Unfortunately, the medical schools of this country have as yet not found a place in their crowded curricula for obligatory instruction in the administering of anesthetics as a delicate art and a *conditio sine qua non* for a license to practice medicine. England seems to be the only country in which the professional anesthetist prevails in hospitals as well as in private practice. From my personal observation, I know that one of the foremost medical faculties in Europe, at the University of Leipzig, made, in 1913, the first attempt of introducing a facultative course of lectures and practical instruction in anesthesia; however, the lecturer was so busy with his surgical hospital service, and at such a great distance, that half of the dates he could not keep, so that it fell to my lot, several times, to fill his place, and, when he really did lecture, he was entirely unprepared and bored his audience with useless historical data. Not once did he convey practical knowledge to the students.

Many of us have been in a predicament when they called, as a matter of form, some available physician to administer the general anesthetic and experienced more anxiety for our patient's wellbeing under the ether or chloroform than any complications of the operation could have provoked. The reported dire results and occasional fatalities from the anesthesia are in the majority of cases, undoubtedly, the fault of the

technic or the ignorance of an unskilled anesthetist.

In order to obviate all the difficulties in those cases in which I had not an expert anesthetist on hand in my own surgical work, I developed, beginning in the year 1909, a method of my own, one of rectal anesthesia. When I look over my special records of 37 cases of 1909 and 1910, I find that I had a simple, reliable rectal method that any regular trained nurse could learn in a short time and which always afforded a safe uninterrupted anesthesia sufficient even for any major operation.

In 1910, I reported this method before the Brooklyn Medical Society of Anesthetists, where it was favorably discussed; for, my method was far superior to the rectal anesthesia then demonstrated, as it dispenses with the complicated apparatus which was shown.

In my present communication, I may be permitted to include the observations on fractional narcosis, as I have called the procedure of speeding up complete anesthesia by the occasional addition of hypodermic and respiratory narcosis to the resorptive method per rectum which I employed, however, only in the experimental stage of any work.

In order to stimulate country practitioners, who may be too great a distance from hospital facilities and whose patients are often better cared for at home than in hospitals, to use and learn to rely upon the simple rectal method that has given me excellent satisfaction, and also considering that for the majority of practicing physi-

cians in any locality an expert anesthetist is out of the question, even rarely obtainable, the technic of administering the narcotic is first described.

Getting Ready for the Procedure

Whoever has carried out or attempted to make a rectal infusion for application of some medicine to the rectum or colon knows that it requires some patience. The difficulty being, that the medicament rarely gets in place and the infusion spreads over a surface of the colon or rectum large enough for resorption, instead of keeping the infused liquid in the rectum. However, the mere introduction of the tube may meet with obstacles.

Although the knee-chest position is an advantage, making the intraabdominal pressure less, whereby the infusion liquid is sucked in and may be retained for entire absorption before placing the patient into the position required by the operation, I have, with few exceptions, employed the left lateral (Sims) position, and found it satisfactory. It is more agreeable to the patient and devoid of the dreadful anticipation when we work behind the patient's back. In an emergency, when exceptionally prompt preparations are necessary and only one small room available, the knee-chest posture is a decided advantage, some skilful person continuing introducing the rectal anesthetic, which the surgeon directed into the proper channels, while he himself prepares everything for the operation, out of sight of the patient. A moderate Trendelenburg posture will sometimes afford the advantages of the knee-chest, without its disadvantages.

The apparatus needed is simple: a glass (or porcelain) funnel of 100 mils³ (about 3 ounces) capacity and a rubber rectal tube No. 28 or 30 Fr. and 37.5 cm. (15 inches) to 40 cm. long. The tubes for sale come, as a rule, 52 cm. long; however, I trim them down to the length which I find most convenient, considering that at least 10 cm. (4 inches) and when we desire to reach the colon at least 20 cm. (8 inches) must be introduced beyond the external sphincter. It is no advantage to use tubes of a bigger caliber, as the resorption from the rectal mucosa requires a certain time, and one must allow for a slow influx. The rectal end should have only one opening—no side

holes. Simplicity being one of the requisites of efficiency, the tube is directly connected with the stem of the glass funnel without intercalation of a short glass tube, which would become necessary, if one insists on using a long tube, for the visible control of the quantity of the anesthetic solution that has passed the sphincter.

The tube is laid in hot water, ready for use and well covered with a pure oil (stano-lind, interol) or an antiseptic water-soluble lubricant (never vaseline or glycerin) before introduction. It is a matter of course that the funnel and tube must be sterilized in each case according to the most efficient method customary with the operator.

The Narcotic Injection Fluid

During the years when I used the here-described method in all suitable cases, I had a standard prescription filled by my druggist, the solution being kept in 10 separate bottles of 50 mils (Cc.) each. The prescription reads:

Isopral	80 grains	(5 Gm)
Ether	2 drams	(8 mils)
Alcohol, absolute.....	3 drams	(12 mils)
Oil, pure ¹	11 oz.	(30 mils)

As each 10 mils of this solution represent 1 Gram (16 grains) of the narcotic, it is easy to increase or decrease the dose by Grams, beginning with not less than 30 mils of the solution: 40 mils (4 grams) being required for the average case; but, 6 Grams of isopral (10 mils of the solution, in addition to the contents of one bottle) can safely be used.

When there is time to prepare a patient for his operation under rectal anesthesia, the entire colon and rectum should be thoroughly emptied and be clean twenty-four hours before the hour set for operation. The method varies, naturally, with the conditions. During these twenty-four hours, I allow the patient only soft and semiliquid diet. On the morning of the operation, an ordinary breakfast can be given, two, better three hours before operating. The rectum is flushed with one quart (or less) of a warm salt solution. If that is impossible because there is no time, it is best to leave the rectum entirely alone, instead of inciting peristalsis, which only would frustrate or delay the infusion of the narcotic solution. A loaded rectum may be

¹The oil may be omitted, sterilized water being added when required or added to the permanent solution.

cleaned in haste by one large glycerin suppository, the remaining glycerin being washed out with one pint or less of warm water.

The Modus Operandi

The very first step in the introduction of the rectal tube may meet with obstacles. Timidity or reflex pain closes the anal sphincter, and the surgeon or attendant must avoid impinging with the top of the tube on the sphincter anteriorly, as the hemorrhoidal branches of the nervous pudendus communis are sensitive to forcible touch. To enter the anus, press the tip of the tube in dorsal direction, or else make an opening by first introducing a gloved lubricated finger, pressing cautiously in a ventral direction, and introduce the rectal tube behind the finger. In some instances, the tube is caught repeatedly in folds of the rectum or by one of the "valves" and stops after penetrating no more than 2 or 3 inches. If it will not advance by aid of the finger, dilation with injected water or inflation with air must make way for it.

Now, assuming that the solution flows freely, which we recognize by the slow sinking of the liquid in the glass funnel, we must observe the caution to maintain low

pressure and allow the liquid to enter the rectum no faster than the mucosa can, according to our judgment, absorb it.

The rate of administration of rectal infusion which I employ is the customary one of proctoclysis of saline solution, or 30 drops to the minute—60 drops being equal to 4 mls entering in 2 minutes, 150 drops equal to 10 mls in five minutes, and 750 drops equal to 50 mls in twenty-five minutes.

Sometimes the influx stops or becomes so slow that it is imperceptible. Then it is permitted to increase the pressure by raising the funnel to the required height. When the end of the tube is caught in a fold (higher up), withdrawing it slightly will correct the position for a renewed free flow. If peristalsis prevents successful influx, one may have to begin over; which, though, happens rarely.

In order to insure the entire measured amount to be retained by the rectum, one follows it with 20 or 30 mls of warm saline solution. As a rule, it suffices merely to withdraw the rectal tube very slowly to make sure that not one drop of the solution is lost.

[To be continued]

Believe, O Friend!

By Edwin Markham

IMPOSSIBLE you say that man survives
The grave—that there are other lives?
More strange, O friend, that we should ever rise
Out of the dark to walk below these skies.
Once having risen into life and light,
We need not wonder at our deathless flight.

*Life is the unbelievable; but now
That this Incredible has taught us how,
We can believe the all-imagining Power
That breathed the Cosmos forth as a golden flower,
Had potency in his breath
To plan us new surprises beyond death—
New spaces and new goals
For the adventure of ascending souls.*

*Be brave, O heart, be brave:
It is not strange that man survives the grave:
'Twould be a stranger thing were he destroyed
Than that he ever vaulted from the void.*

What Others are Doing

A COMPARISON OF PHYSICAL SIGNS, SYMPTOMS, AND X-RAY EVIDENCE OBTAINED IN PULMONARY TUBERCU- LOSIS

F. H. Heise and A. L. Sampson, of Trudeau, New York, report in the February number of *The American Review of Tuberculosis* a comparative analysis of the evidence obtained by different methods of examination in pulmonary tuberculosis. They review the varied pathology of the lung in tuberculosis and the probable associated changes of density of the different lesions as assumed to exist as a basis for the interpretation of x-ray plates. By means of the x-ray, some idea is gained of the extent of the disease and the type of pathology underlying the physical signs, giving rise to the local and general disturbances of the system, thus bridging, in part, the gap which is left between the evidence derived from symptoms and physical signs, respectively.

The authors have been impressed with the frequency of cases with clinical evidence of pulmonary tuberculosis without signs in the x-ray plates of gross densities, but, with definite shadows of tubercles in the linear arrangement, concomitant with the pulmonary ramifications. They interpret this as a possible manifestation of a lymphatic pulmonary tuberculosis and infection from the medium bronchi of the lymphatic tract or spaces of the tissue surrounding the medium bronchi and arteries. They call this the peribronchial, or lymphatic, type as contrasted with the parenchymatous or alveolar type.

Dividing the latest series of 235 cases at the sanatorium into these two groups they have tabulated the percentage of occurrence of those symptoms, physical signs and laboratory findings which would in themselves indicate the probable existence of a pulmonary tuberculosis. They conclude from the analysis that there is a type of pulmonary tuberculosis showing

x-ray shadows of peribronchial distribution which is otherwise characterized as follows:

(1.) By the less frequent occurrence of hemoptysis. (2.) By the infrequency of the occurrence (7 per cent.) of tubercle bacilli in the sputum. (3.) By the limited occurrence (3 per cent.) of medium coarse rales. (4.) By the less frequent occurrence of the positive complement fixation reaction. (5.) By an apparently lessened skin sensitiveness to tuberculin.

It would seem probable that this type of lesion has no communication with a bronchial lumen—that absorption into the blood-stream does not take place as freely as in the usual type.

Assuming a justification for the differentiation of the two types seen in the x-ray plates the authors make a further comparison with the usual classification of cases made by symptoms and physical signs.

They find that, roughly, one-half of the incipient cases are of the patchy, or parenchymatous, type. Of the moderately advanced cases, the greater number showed evidence of parenchymatous change. The latter is probably a more advanced or more unfavorable lesion or the expression of a different kind of infection, either as to time or route of infection, or both. The subdivision of incipient cases makes feasible a more accurate knowledge of the type of pathology and probably also of the clinical course.

The x-ray is also found in their analysis to be of great value in the diagnosis of early cases without definite physical signs and as a check upon the physical examination where the lesions give signs limited to dulness, changes in breathing, and increased voice transmission.

THIN OUT

In these days, when everyone of us is, necessarily, considering the means of meeting the high cost of living, there is a bit

of suggestion to be obtained from a recent number of *The Journal of Agricultural Research*. In the number referred to, experts of the Department of Agriculture consider the relation between their accumulation of fats by cattle and their utilization of the food ingested. While we are not exactly cattle—although it is somewhat difficult to draw the line in the case of some alleged human beings—the conclusion drawn in this article might well be applied in our daily work.

The influence of light and of heavy rations upon steers, before and after they had been fattened, was studied. It was shown that light rations are more completely digested than are the heavier ones, although the difference was not as great as might be expected. Corresponding rations were digested equally well by the fattened and unfattened animals. The loss of nitrogen, carbon, and energy, as well as of methane, was relatively less on the heavy diet. The most important observation, however, was, that it required a correspondingly larger amount of food to sustain the weight of the animal, even when unfattened. If weight of the animals be increased 50 percent, it would require 50 percent more food to sustain this weight, without gaining further increase.

Wherefore, O ye men of steadily expanding equator, you will see that you are paying needlessly for the maintenance of an encumbering and disfiguring longitude and that, by reducing your proportion within the normal of the Greek ideal, you will be able to sustain life, liberty, and the pursuit of happiness with a corresponding decrease of expenditure of pabulum.

HORSE MEAT AS FOOD

When conferences are being held as to the amount of whale meat that can be secured to meet meatless days, we recall that these inhabitants of the deep live wholly a cannibal life; when shark meat is quoted at 20 cents a pound, while once their meat was despised, because their source of sustenance is like that of the whale; why then, should anyone shudder at the consumption of equine flesh, when the horse lives only on the richest cereal grains and the most succulent grasses of the plains and mountains of the west, where the air and the

sunshine are the purest and where the valleys and hills are watered by the freshest and least-soiled water of our land?

This question was pertinently asked by Dr. W. H. Hoskins, of New York, at a recent meeting of the Veterinary Medical Association of New Jersey (*Jour. Amer. Vet. Med. Asso.*, April). Continuing, Doctor Hoskins says that it will be better to provide clean and wholesome equine steaks at 15 cents a pound than to hunt sharks, the meat of which costs 25 percent more. Horse meat is accessible in our own country, on our own lands, opening up a vast untouched source of animal food that is rich, clean, wholesome, free from tuberculosis infection. Moreover, the using up of this food supply would afford hundreds of thousands of acres of land, ready for the tilling, to lessen our wheatless days, which are now given up to large herds of horses roaming over the prairies of the western states.

The utilization of the horse for supplementing our meat supply has nothing to oppose it, except sentimental reasons and, as was pointed out in these columns a few months ago (Nov. 1917, p. 841), possibly—indeed, probably—the ancient religious proscription of horse flesh. The eating of this was believed by the old missionaries to be prejudicial to the advance of Christianity, since the animal had been sacred to the gods of Valhalla. Certain it is, however, that the most recent substitutes, namely, whale and shark, offend against the esthetic sense, since both animals are carnivorous; living, as they do, on other fish. Nor are they any cleaner than horses, despite the fact that water is their natural habitat; for, undoubtedly, the horse is one of our cleanest animals, certainly our cleanest feeder. It lives on green grasses, hay, grain, all of which are wholesome and unobjectionable, far more so than is the occasional, if not preferential, diet of the hog, that delights in swill and is not above taking a bite of flesh if it can secure it.

Undoubtedly, we have, in the numberless horses roaming all but wild in our western states, an immense supply of clean, nutritious, and wholesome food that can be made available at relatively small expense, that could be maintained easily enough, and that even would make it possible to provide our armies with additional quantities of meat,

aside from the beef and pork that is being sent over seas now.

Incidentally, we are convinced that the farmers in certain parts of our country in the United States should devote more attention to the raising of sheep and goats for food; but, that is another story.

MECHANISM OF THE ACTION OF ACONITE ON THE CARDIO- VASCULAR AND RESPIRA- TORY APPARATUS

In the therapeutic institute of the University of Naples, a series of experiments were carried on by Dr. A. Chistoni, relative to the action of aconite on the circulatory and respiratory apparatus. The report on his findings, published originally in the *Archivo de Farmacologia Sperimentale* and reproduced in *La Semana Medica* for January 17, is as follows:

The author's observations show that aconite acts upon the heart of the frog, by influencing mainly the intrinsic and extrinsic nervous apparatus, and, in part, also upon the myocardium. The acceleration of the heart beats depends upon the excitation of the accelerator apparatus. The activity of the myocardium is increased by minute doses of aconite preparations and is diminished through relatively high doses.

In mammals (dogs), the subcutaneous injection of small doses of aconitine or of fluid extract of aconite diminishes in a constant manner the number of pulse beats and the average blood pressure.

These phenomena are due to the excitation of the cardioinhibitory apparatus and to the diminution of the excitability of the vasoconstrictor centers. In effect, the slowness of the heart beats may be prevented, in part, by cutting, in the neck, the vagosympathetic nerve-trunks, and completely if atropine is also administered. The electric excitation of the central portion of the sciatic nerve, in conjunction with the asphyxia, increases momentarily the blood pressure, except when the vasoconstrictor centers are absolutely unexcitable, in which case, in order to increase this tension, it is necessary to resort to the intravenous injection of adrenalin; which indicates that the vascular paralysis produced by aconite is of central origin. The transitory acceleration of the heart beats which sometimes is observed after administering preparations of aconite to animals whose vago-

sympathetic nerve-trunks have been severed will be found, in all probability, to be related to the initial excitation of the accelerator apparatus.

The effect upon the isolated heart of mammalia (rabbit) through which is made to circulate nutritive liquid containing crystallized aconitine in proportion of 1:1,000,000, is, greatly to accelerate the contraction, this being followed in a few seconds by paralysis of the heart in systole or by a more or less long period of intense fibrillation of the myocardium, preceding the definite paralysis. Causing to circulate the aconitine in a dilution of less than 1 : 12,000,000 acceleration of the heart contraction is observed, owing to the excitation of the accelerator apparatus. If the circulation of the drug is prolonged for any time, the excitation of the accelerator apparatus is replaced by a depression and even by paralysis of the same.

[This confirms Schmiedeberg.—ED.]

Excluding, by means of atropine, the influence of the moderator apparatus, one can observe a very great preponderance of the influence of the accelerator upon the heart, as revealed by an increase in the frequency of the heart contractions.

Aconitine does not alter in the least the caliber of the coronary vessels. The contractility and excitability of the myocardium are augmented.

The respiration of mammalia is influenced decidedly by crystallized aconitine as also by fluid extract of aconite, and the modification which the remedy produces in it varies in proportion to the dose administered. Very small doses produce taquinea by exciting the respiratory centers, this lasting for a longer or shorter period, according to the conditions obtaining. Following increased doses, the period of respiratory acceleration is much shorter and soon is replaced by slow and finally absence of respiration. These phenomena have a central origin and result from the depressing action of aconite upon the respiratory centers.

THE CONTROL OF BUBONIC PLAGUE

In an article published in *La Semana Médica* of Buenos Aires, Dr. Julio B. Valdes, director of the section of public hygiene, Rosario de Santa Fé, makes some excellent suggestions regarding the prophy-

laxis of bubonic plague as it has occurred in Rosario.

Doctor Valdes says that the great problem is, to prevent the diffusion of this plague by transportation and particularly by the railways. The centers of infection were mostly in the large warehouse districts. In addition to the large quantities of merchandise, the railways transport also insects; they will carry some persons sick with the disease in so mild a form as to escape diagnosis. Also, persons with benign cases of the bubonic pest work in the warehouse where the merchandise is shipped out to various points. The greatest number of cases, according to Valdes, occurred, however, where rats are most numerous.

The first fundamental is, to organize an efficient sanitary force that will destroy the rats, clean and disinfect premises, and watch for evidences of the plague as well as other transmissible diseases, particularly among the workers in the warehouse districts. The rats should be sent to a government laboratory, to be examined, and at the first evidence of infection regular vigorous hygienic quarantine measures should be adopted. The establishment should be closed and hermetically sealed so that the germs of the disease as well as the rats can be exterminated. Doctor Valdes makes various suggestions for destroying the rats, and particularly recommends the use of anhydrous sulphurous gas, as also steam under pressure.

Doctor Valdes recommends that all warehouses be constructed as nearly rat-proof as possible; he also makes recommendation for a sanitary ordinance, containing eight articles, that should be put into force, the same requiring proprietors of establishments to destroy rats, besides providing for public assistance where that seems necessary. The sanitary regulations also prescribe the manner in which warehouses should be built, and it provides penalties for failure to comply with its regulations as well as for failure to report any cases of the bubonic plague.

CAN TREATMENT INFLUENCE THE DEATH RATE FROM LOBAR PNEUMONIA?

In 1889, Coolidge and Townsend published an analysis of 1000 consecutive cases of lobar pneumonia, comprising all those

treated at the Massachusetts General Hospital from the year 1822 to that date. This analysis has been supplemented by a recent study of all cases of lobar pneumonia treated at the same hospital during the period 1889 to 1917, the latter paper being contributed to *The Boston Medical and Surgical Journal* for February 21 by F. C. Shattuck and C. H. Lawrence.

The total series of cases the records of which were studied comprised over 4,000, and it was found that the mortality from lobar pneumonia has gradually increased, from 10 percent in the first decade, to 28 percent at the present time. This present death rate has been the prevailing one since 1881.

There has been a decided increase in complicated cases; which, however, probably is due to greater accuracy in diagnosis and recording.

While the relative number of foreign-born patients is increasing, the mortality among these is diminishing. On the other hand, the death rate among American-born patients has increased slightly, and so has, also, the mortality among men as compared with that among women.

The authors in question conclude from their study that treatment has done nothing toward diminishing the mortality from pneumonia in the past ninety-five years. Bleeding, purging, fresh air—the result has been the same. No change is to be expected, the authors opine, in the results of treatment, until a specific is discovered that will neutralize the toxins of the pneumococcus.

Incidentally, an interesting point is raised concerning the effect of alcohol. Its previous habitual use, during health, in more than moderate amounts, is shown to diminish the patient's chances of recovery. But, the mortality rate among those patients who were given large amounts of alcohol during their illness is no higher than among those given no alcohol, but, fresh air freely. The figures do not indicate that alcohol is harmful to those sick with pneumonia. They suggest that the effect of the drug varies with the conditions under which it is given, and that it is not poisonous to those who have high temperatures and are taking insufficient nourishment. So far the report.

It is rather a pitiful showing that the treatment of pneumonia, as conducted in one of the leading hospitals of the country,

by men among the foremost in the medical profession, has yielded no better result than an increase in mortality rate, from 10 percent, to 28 percent among the patients there treated. That being the case, it seems as though those men who claim far better clinical results from active and definite methods of treatment should be accorded a hearing.

In CLINICAL MEDICINE for February, 1917, Dr. Solomon Solis Cohen gave some bedside directions for the treatment of acute lobar pneumonia, his essential treatment being quinine and urea hydrochloride, while, incidentally, special indications are met as seems most suitable. Under this form of treatment, the clinical results give a much better showing. A goodly number of reports have been published, during these years, in these pages, mostly by general practitioners, who assert positively that the mortality among their lobar-pneumonia patients is low—certainly less than 10 percent. And this can be accomplished by means of active treatment. It may be suggested that the orthodox "expectant" treatment hardly is justified or even defensible, though it has the sanction of the Massachusetts General Hospital.

WHEN IS SYPHILIS CURED?

In an editorial in its April issue, *The Medical World* discusses the important question of when a disease is cured. All contagious diseases, especially, require careful attention, to determine the point when cure can be said to have occurred. This problem acquires particular prominence in a disease that is so manifold in its influence far beyond the affected individual as is syphilis. In accordance with its possible effects upon the posterity of the patient, the determination of a definite cure should be the aim of every physician handling cases of this kind, and its importance necessarily must be impressed upon the patient himself.

Years ago, after a period of three years of persistent treatment, followed by two years without treatment, during which no visible signs of recurrence were evidenced, syphilis was said to be cured. This frequently was the occasion for giving consent to the patient to get married. Unfortunately, though, in most instances, the patient probably was not cured, as became evident some years ago, after the introduction of the Wassermann test, when "cured"

syphilitics were subjected to it and gave a positive reaction in a large percentage of cases. However, even this test may be misleading when negative. After a period of intensive treatment or of salvarsan injections, the patient's blood may show a negative reaction, and, yet, still later, it may yield a positive reaction. Or, also, while the blood may show a negative reaction, a positive reaction may be obtained in the spinal fluid.

Under these circumstances, the editorial in question continues, there is only one known test that can be said to be infallible, and that is, a reinfection with syphilis—which, though, if "successful," is not a condition exactly satisfactory to the patient, despite its proving that he had been cured. Thus, then, this heroic test not being applicable in practice, it must be admitted, despite the improvement and refinement of treatment, that the point as to when syphilis is cured still is unsettled. Indeed, observations seem to suggest the disconcerting and disappointing conclusion that possibly no known treatment is capable of eradicating syphilitic infection.

From all of which it follows that clinically syphilitic patients should be urged to submit to intensive treatment until every symptom has definitely disappeared, and then should continue under medical observation for one to two years, meanwhile reporting for periodical Wassermann tests, and, if indicated, submit to periodical courses of treatment at intervals of from six months to one or two years. By this course, it will probably, be possible to prevent harmful proliferation of the syphilis-virus and ultimate involvement of the nervous system.

PHYSICAL FATIGUE AS A FACTOR IN INCREASING SUSCEPTIBILITY TO COMMUNICABLE DISEASE

Public Health Reports for March 22nd (p. 403) reminds us that fatigue in its relation to health has been the subject of many investigations. With the beginning of the present world war and the immediate need for soldiers, sailors, and munitions, this question became one of great importance. The effects of fatigue in the making of soldiers, sailors, and of munitions should be very carefully watched, with a view to maintaining the output of training camps and munition-factories at its highest level

during the war. No necessary sacrifice of men should be questioned at this time, but, when methods employed for speeding up this output are liable to "invite disaster," such methods should be carefully revised.

In the investigations into the prevalence of communicable diseases conducted by the division of sanitation of the Bureau of Medicine and Surgery of the Navy Department, the conclusion was reached that fatigue is a factor in their spread and that "the attempt to make a sailor too rapidly is, to invite disaster."

In "Notes on Preventive Medicine for Medical Officers, United States Navy," published as Bulletin No. 12, Division of Sanitation, by the Department of the Navy, the point was brought out that, while many persons in camp may harbor in the rhinopharynx the causative meningococcus of cerebrospinal fever, relatively few of the men exposed contract the disease, but, that many of them become meningococcus-carriers. All meningococci may not be and probably are not virulent. Individuals vary in susceptibility; and, indeed, susceptibility seems to vary from time to time in the same individual. Other infections, age, exposure, fatigue, mental depression, digestive disturbances, lack of food, and unsuitable clothing, individually or collectively, undoubtedly play an important role.

In the development of lobar pneumonia or of cerebrospinal fever, experience seems to show, one of the most important factors active is that of fatigue. This was evident particularly at Great Lakes, in connection with last winter's outbreak of communicable diseases, when, the incoming detention being broken, several thousand recruits were subjected too early and too precipitately to the excellent but intensive system of training in vogue at that station. About the same time, two severe blizzards occurred and it was necessary to employ several thousand apprentice seamen to clear the roads and walks of snow from 3 to 6 feet deep. There was thus involved an unusual amount of hard work combined with exposure, and this brought about, in many instances, a certain degree of fatigue and lowering of resistance to infection. Shortly thereafter, there occurred a widespread prevalence of bronchitis and coryza, followed by an outbreak of various communicable diseases of the respiratory type, including lobar pneumonia and cerebrospinal fever. Similar experiences were had

elsewhere; and, in truth, "the attempt to make a sailor too rapidly is, to invite disaster."

PHYSICAL FATIGUE AS A FACTOR IN INDUSTRIAL EFFICIENCY

In the preceding article reports are cited concerning investigations made at several naval training stations, substantiating the conclusion that fatigue should be avoided in training, as it has been found necessary to prevent it in munition-factories. Investigations in the latter establishments have shown that the output in a work-day of eight hours, of two 4-hour periods, was materially increased by permitting ten minutes for rest out of each 4-hour period. It was also shown that the night shift, which was required to work nine hours—divided into a 4-hour and a 5-hour period—gave results in the 4-hour period which did not differ materially from those given in the first day-period, but that during the 5-hour period very little output was secured in the last hour. By eliminating an hour from this period, the total output for the night shift actually was increased.

The results of these various investigations and inquiries can readily be applied to conditions in civil life, even if the theory promulgated a few years ago, according to which fatigue-toxins develop in the course of continued exertion and may be responsible for serious consequences, is not definitely established. That "haste makes waste" is true and all speeding up, is exceedingly liable to defeat its object if pushed beyond the limits of safety.

ACONITE IN TONSILLITIS

In the February number of *The Therapeutic Gazette*, A. J. Rodman writes concerning the treatment of diseases of the tonsils. "If the medical fraternity knew the influence aconite has on the tonsil, its diseases would be much less troublesome. I learned this power of aconite over the tonsils accidentally. When called to treat quinsy—a very common disease in Illinois, where I then resided—and finding the tonsils inflamed and largely swollen, I used aconite quite freely in the treatment, and soon found I had a very effective remedy for that painful disease, and that, unless pus had already formed when called to the case, I never had that disagreeable termination of the disease."

Miscellaneous Articles

Studies on Food Economics

XII. Carbohydrates and Hydrocarbons

THE largest proportion of man's food is composed of the carbohydrates and hydrocarbons, the protein portion being required only to repair the waste of the albuminoid tissues of our bodies; both these carbonaceous elements of our food being mainly engaged, in our life-processes, in furnishing force and heat. In cold climates, where the demand for heat-producing food is the greatest, the hydrocarbons, or fats and oils, are most in evidence, these being the easiest converted into body-fuel. In southern countries, on the contrary, production of heat is subordinate to that of force, hence, there the carbohydrates of our food supplies are more prominent.

The world, at this period in the world-war, is confronted by an inadequate supply of the cereal foods and flesh material; however, the semitropical and tropical countries can make up in nutritive material this cereal shortage in such an abundance that the want-cry of food may be hushed.

It is a remarkable fact that the albuminoids are present in *the banana* in almost the same proportion as they are found in milk; the latter, according to three investigators, containing them to the extent of 4.3 percent. Dry wheat flour contains about 12 percent of albuminoids; hence, one pound of it would be equalled in nourishment by three pounds of fresh bananas. Were these dried and reduced to flour, one pound of this banana flour would, probably, equal two pounds of wheat flour in nourishment.

Inasmuch as the potato is one of the main foods of the Anglo-Saxon races of mankind and there being a shortage of this vegetable in the United States; and, further, the labor required to produce this crop, if diverted to the cereal, would largely increase the supply of the latter, hence, if we can obtain a partial substitute for

potatoes, we shall, thereby, greatly increase our food supply.

A comparison of the banana with the potato is of particular interest. Quoting from an analysis of Atwater and Bryant (p. 68 of Bul. No. 28), we have the following figures:

	Potato	Banana
Water	78.3	75.3
Protein	2.2	1.3
Fat	0.1	.6
Total carbohydrates including fiber	18.0	22.00
Ash	1.0	8.
Calories	28.5	46.0

As to the ash of banana, we have the following:

Silica	2.19
Lime	1.82
Iron oxide	0.18
Phosphoric acid	7.68
Magnesia	6.45
Soda	15.11
Potassa	43.55
Sulphur trioxide	3.26
Chlorine	7.23

Thus it is seen that the ash of the banana is largely made up of the basic salts—the carbonates, phosphates, chlorides, and sulphates of potassium, sodium, and magnesium, the elements so necessary to the health of the body in its vital processes.

Now, while potatoes, onions, and bananas all yield an alkaline ash, and thus are antagonistic to the development of acidosis, the two former vegetables have become, during the past year, almost prohibitive in price to the working people of this country, while the banana is about the only food which during the last two years has not shown a marked increase in price. It is, in fact, "the poor man's food," since its supply is unlimited; the only limit in this country being the import duty. However, being a necessary food, no duty should in-

terfere with its entry into the country.

The present need of the government for alcohol is great, and the banana is a much better source from which to obtain it by fermentation than are the cereals. By a free and extended importation of bananas, much grain might be diverted from distillation and added to our food supply.

Food conservation is proper, and all right in the main, but, it is poor policy to underfeed a people. Disease always follows in the wake of an insufficient food supply of a people. The banana may be used as a food supply during the whole year. Reckoned by calories, bananas at present prices will give us 65.9 for one cent, while one cent will purchase of potatoes containing only 46.6 calories.

Another thought. Sugar being a necessary food for the human family, and the present world's supply being inadequate, why not look to the banana for an additional amount? The banana certainly stands in the front rank of sugar-producing plants.

The fruit can be dried at the points of production and shipped in the form of flour. A sample of such flour had the following percentage, as compared with wheat flour:

	Moisture	Proteid	Carbohydrates	Minerals
Banana flour	13.0	4.0	80.0	2.5
Wheat flour	13.8	7.9	76.4	0.5

Another thought: the starch of the banana is much more digestible than are the cereal starches. Again, we find by comparison that the banana is, as a dried meal, about the equal of rice meal. In fact, we find it in tropical countries largely used in the place of grain as a food. One acre of bananas, it is said, will feed a family. Hence, this abundance of food tends to reduce the stimulus to labor.

Were our soldiers supplied with an abundance of bananas as food, not only would their energies be increased, but their health would be better sustained.

Again, in civil practice, were the medical profession to teach patients the food value and healthfulness of bananas, they would be doing their little bit toward the conservation of life by an added nutrition.

A. T. CUZNER.

Gilmore, Fla.

UNIFORMS? NO, INDEED!

I see in your January number that Dr. H. J. Smejkal comes forward with an

article advocating uniforming members of Selective-Service Boards. I wish to take exception to such a procedure. While it might do for the larger cities, where so many are strangers to members, I do not believe that the localities outside would sanction such a procedure for a moment. I know our Board would not. The members of the local boards, outside of large centers, are as well known by everyone as is the sheriff and the county judge. The shield sent to every board member, with its "Selective Service, U. S.," worn as a lapel-button, is all-sufficient, and I hope the suggestion may not be acted upon by the government.

E. V. ANDERSON.

Woodstock, Ill.

"EVERY DOCTOR IN THE MEDICAL RESERVE CORPS"

On page 110 of the February number, I notice an article headed "Every Doctor in the Medical Reserve Corps." I approve and advocate your sentiment; I have even taken a step in advance, for, in December last, I wrote a personal letter to our efficient secretary of war, Mr. Newton Baker, that every physician in the United States should be drafted for service. I also suggested a plan that could be put into immediate practice and service; which is as follows:

Draft every physician in the country for service, then eliminate all those physically (or mentally) unfit, age to be no bar, if fit. Classify as follows: Age, 21 to 40, for active service at the front; 40 to 50, at intermediate hospitals; 50 to 60, at base hospitals; all above 60 to be stationed at their own base (homes), for service. These last ones should constitute the examiners' boards (drafts, disabilities, etc.).

Of course, this is but a rough sketch of the plan, but, such a plan could be worked out and would be efficient.

GEO. STOSKOPF.

Lakewood, Ohio.

SHOCK: ITS ETIOLOGY AND TREATMENT

The condition known as shock or collapse may be defined as a sudden depression of vital powers that is caused by an injury or deep emotion. As a result, the nerve centers are acted upon and there

is exhaustion or inhibition of the nervous mechanism. The causes of shock are many, but, among the most common, other than psychic, may be mentioned internal hemorrhage, infectious diseases such as typhoid fever and diphtheria, lesions of the heart and lung, as pneumonia, abdominal diseases, as gastric ulcer and intestinal perforation. Shock may also occur after a severe trauma or surgical operation.

As to the theories for the causation of shock, there are many. The most plausible, however, is that of Crile. The latter believes that shock results from the exhaustion of the vasoconstrictor center. This exhaustion is brought about by an overwhelming inflow of afferent impulses. It is evident, therefore, that in our treatment no medication should be given that will increase these impulses, but, rather, should be made to block these paths.

A very common picture was, and even is now, to see a patient who has suddenly become pale, skin clammy, pulse barely perceptible, and respiration shallow, and perhaps losing consciousness, being given strychnine by mouth or hypodermically, or perhaps given whisky or caffeine. All these drugs tend to increase the afferent impulses and, hence, do more harm than good. The symptoms described are those of shock. The blood pressure is found to be lowered, the temperature may at times be subnormal, general muscular weakness is complained of, and the mind becomes dulled.

The treatment toward this condition is simple. No drugs such as camphor, caffeine or strychnine should be given, as these only tend to stimulate psychic centers; hence, increase the impulses and, therefore, aggravate the condition of the patient.

In moderate attacks, as where there is a feeling of faintness or in fainting, either let the patient sit with his head between his legs or let him lie down, with head lower than his feet. A whiff of aromatic spirit of ammonia very often is effective in reviving the patient.

In cases more severe, absolute rest, plenty of air, and the maintenance of body warmth by means of hot-water-bags or blankets is essential. Morphine acts here almost as a specific. Adrenalin (15 minims of the 1:1000 solution) intramuscularly or intravenously raises the blood pressure and often is effective. Where there is hemorrhage, a saline infusion, about 1000 mls (Cc.), to which adren-

alin has been added and slowly administered, greatly hastens recovery. Pituitrin, 1 mil, hypodermically or intravenously, also may be used.

The essential thing is, not to stimulate, but, to rest. One of the best means to block the impulses is morphine.

I. RUSSELL KUHN.

Fallsburg, N. Y.

[Quite recently, Dr. W. T. Porter, of the Rockefeller Institute, advanced a new hypothesis concerning traumatic shock, which has much to commend it. Doctor Porter had been sent to France for the purpose of studying the question whether the violence of bombardment predisposes the wounded to shock. If so, the lowering of blood pressure would occur very soon after the wound is received. He found that shock occurs most frequently after fracture of the femur and after wounds (multiple) of the fatty tissue. Laboratory studies seemed to prove that it is the presence of fats absorbed into the circulation that cause traumatic shock by producing fatty embolism in the smaller capillaries. If the circulation could be stimulated, these embolisms might be overcome and the blood made to flow back into the heart, where it was needed, from the veins in which it was dammed up by the globules of fat. Porter accomplished this by increasing the force and frequency of the respiration, thus stimulating the "respiratory pump."

Doctor Porter's communication is referred to editorially in *The New York Medical Journal* for January 23, where more details regarding it can be found. ED.]

TO THE DOCTORS' WIVES WHO ARE LEFT BEHIND

As another doctor's wife whose husband is serving overseas, I thought I would like to try and cheer up your correspondent who writes in the March issue of *CLINICAL MEDICINE*.

We left England some years ago and settled here in Canada, but, when this awful war broke out, my husband could not be happy doing nothing to help; so, two years ago, he returned to England and joined the R. A. M. C., leaving me and our six children here. Since then, one son has joined the R. F. C., and I am living away

out in the country twenty-five miles from town; but, not unhappy, for, I feel that we are doing our share to help win the war, and am praying and trusting that we may be united before so very long. Your correspondent should be happy having her father; I have no relations at all in this country.

I, like her, also read CLINICAL MEDICINE each month and am keeping up my husband's subscription, and I should miss the magazine very much if I did not get it. I hope that she will look on the bright side of things and that her doctor may come home safely to her, as I trust mine will.

ANOTHER DOCTOR'S WIFE.

THE CRUSADE

The people, the people have taken up the sword
And ranged themselves beside the conquering legions of the Lord;
They are marching, they are marching, with a swift and fateful tread,
To the rescue of their living and the vengeance of their dead.

The nations, the nations are gathering for the tryst
Of freemen with freemen at the newmade tomb of Christ;
The earth is shaking, shaking, and the veil is rent in twain—
But, wo to them, on trysting-day, by whom the Christ was slain!

The glory, the glory of a resurrection noon
Is reddening in the darkened sun and in the bloody moon;
The dawn is breaking, breaking, through the triple-banded night
And earth will soon be flooded with resurrection light.

America, America has heard the trumpet blast,
Her sons have hit the trail that leads through blood to peace at last;
She has flung the Stars and Stripes about the body of her Lord,
And she'll blaze His way to victory with the lightning of her sword.

T. G. ATKINSON.

Chicago, Ill.

BOOKS AND INSTRUMENTS FOR SALE

We are informed by Mrs. Bertha Murphy, Box 24, Wawota, Saskatchewan, Canada, that she desires to dispose of the books and instruments of her late husband, Dr.

J. J. Murphy, who was a valued subscriber of *The American Journal of Clinical Medicine*. We hope that it may be possible to aid Mrs. Murphy in realizing something on these things—which her husband bought at considerable expense—because, of course, the money would be of service to her.

WHAT THE WAR HAS DONE FOR MEDICINE

The great war has presented to the world a new form of community life, with a new combination of the various elements that are to be found in every concentration of the population of western countries.

This war is unlike any previous war, in that the old idea of campaigns, with armies fighting battles and moving over large districts of territory, was true in Belgium and France only for the first few weeks of the conflict. Such a conception has been realized more in the distant battlefields of Asia and eastern Europe. The majority of the troops engaged on the west front have settled down to a permanent location and have continued more or less fixed in position for more than three years, while they carry on their daily and nightly tasks of combat in what is known as trench warfare.

This war of 1914-1918 has developed, therefore, a community which has a population exclusively male, densely concentrated into habitations of the rudest structure, without modern facilities for sanitation, for ordinary cleanliness or for the housekeeping-needs of the poorest dwellers in modern cities. The inhabitants of these "towns" are absolutely nonsupporting and chiefly employed in killing with rifles, bombs and machine-guns their nearest neighbors or in protecting themselves from the like desire of their neighbors to "do" them first.

This population is a shifting one so far as the individuals are concerned, and it must be supplied with every necessity of life, and with the munition supplies, as well, to carry on its chief occupation. These trench towns consume, in proportion to their population, a vast amount of supplies and the inhabitants live a life entirely different from that of any community previously known in times of peace.

Such a community has developed new medical problems and has exaggerated some older ones already well known to the army

medical departments of all nations. The modern weapons, with their high explosives and rapid fire and the inhumanities of asphyxiating gases and liquid fire have produced surgical conditions which are extremely infrequent as complications of the accidents of civil life. The habit of continuous warfare also has compelled the relief-squads to delay their merciful tasks, and there results a high percentage of neglected infection and of the severer forms of blood-poisoning and gangrene, which modern aseptic surgery had eliminated from the experience of hospital practice.

At the beginning of the war, an appreciable number of troops had not been protected by the modern methods of vaccination against typhoid fever. That disease and more particularly the closely allied condition of paratyphoid fever were very prevalent. At the present time, both diseases have been controlled to a large extent by a full application of the methods that were developed and first applied in the army of the United States. At the present time, owing to the perverse influence of the so-called "antivivisectionists" in England, this form of preventive inoculation is only voluntary in the English army. Nevertheless, nearly all the Tommies request it, because its good effects have been demonstrated conclusively even to the enlisted men. The latest development of the war is, an earnest endeavor to apply the same preventive measure to control the various forms of pneumonia, which has become a real menace to the troops wherever they are concentrated in large numbers.

The war has necessitated the formulation of methods to control diseases communicated by water. This has been done, and dysentery, one of the oldest foes of armies, has been made less prevalent than in former wars. The present-day army-physician must do more on these lines, however. He must discover, by quick action, any contamination of wells and other supplies of drinking-water from the introduction of dead animals, sewage, and even mineral poisons, such as arsenic, whenever the allies advance into the territory lately occupied by the modern Huns.

The war has emphasized the importance of the group of diseases which are transmitted by the bite of vermin. One of these, known as "spotted typhus," is caused by the

body-louse and is normally found in south-eastern Europe. This noxious parasite has come under control by a rigid application of sanitary rules and by inoculation. Another disease of this group is known as trench fever, and was discovered and introduced into western Europe by the war, probably from the Orient. It is a short, very debilitating fever of low mortality, but, one that incapacitates its victims for an appreciable period.

The medical staffs have controlled the ravages and negated the military advantages which the German military staff expected to gain from the illegitimate use of large quantities of irritating gases. This was done by the application of properly constructed masks, although a number of casualties and substantial gains were made at the first attempt to advance in this manner.

The greatest additions to the antiseptic treatment of wounds have come from the chemical studies of Doctor Dakin, who has applied in various ways the properties of chlorine preparations to the disinfection of the wounds of this war. The problem which Doctor Dakin solved was, to discover strong antiseptics capable of destroying microbes without damaging normal tissues. Dr. Alexis Carrel developed a method of using the antiseptics of Doctor Dakin in the severely infected wounds that came to his hospital on the French front. His method consists in putting into the wounded tissues a system of multiple tubes and keeping the wound constantly washed with the antiseptic solution. The progress of the wound is watched by a daily bacteriological examination, and as soon as it is germ-free it is closed, when healing is quite prompt if the observations have been done in a precise manner.

The war has developed two large groups of cripples, one including those who have been maimed by the loss of hands, of arms, of legs, of eyesight, and in other physical ways. A great endeavor has begun to re-educate these men and to fit them for new trades and for a useful and self-supporting life. Many of this group of men can be taught to do work equally effective to that of their antebellum activities, although in a totally different line of endeavor. The second group of cripples are those who suffer from functional disturbances of the central

nervous system. These cases present paralyzes and other disturbances of locomotion that are purely hysterical or they manifest mental disorders that also are functional, but, which simulate true insanity in any of its manifold varieties. One of the most characteristic cases is that known as "shell-shock," which is attributed directly to the sudden and unexpected exposure to the vibration and noise of the discharge of high explosives in a person overtired by physical work and overwrought by mental fatigue. A great success has been achieved by systems of nerve and muscle education, especially in French institutions devoted to this work. Many of the sufferers from these functional disturbances of the nervous system have been returned to a useful civil life, some even having rejoined the fighting ranks.

The effect of the war upon medical education has been very striking.

The war has taken away all the surplusage from medical teaching staffs—particularly the surgical branches—and has rendered a complete medical education increasingly difficult. The College of Physicians and Surgeons of Columbia University has lost, probably, more than a fourth of its force of instructors; in surgery, about a third. The effect upon civil hospitals has been equally startling. The attending staffs have been depleted in equal ratio with the staffs of the medical colleges. Hospital internes have accepted service after the one year of training required by law for the army and navy. Because of their enthusiasm, they have not waited to finish the two years usually required by most hospitals in this part of the country. There has been a tremendous upsetting of routine and personnel. Probably more than one-half of the internes have been lost to their hospitals. Many hospitals have reduced the term of service to one year.

To meet this deficit of men, the largest medical schools of New York City have put new speed into their instruction, by omitting the usual vacation between the third and fourth years, and will graduate students in February, instead of June. Columbia, New York University, and Fordham have made this change.

At the same time, by intensive training and by clinging tenaciously to high standards, the medical schools are resolved, as

well as confident, that the war shall not make the coming generation of physicians less well trained. When the score is added, it will be found that the war has done much to advance medicine along particular lines and that medicine has done much to advance the war.

SAMUEL W. LAMBERT.

New York, N. Y.

THE EAGLES ARE COMING!

Methinks I see in my mind a noble puissant nation,
rousing herself like a strong man after sleep and
shaking her invincible locks; methinks I see her as an
eagle viewing her mighty youth and kindling her en-
dazzled eyes at the full midday beam.—MILTON.

The eagles are coming. Fast hasten the
day

When we shall behold them in battle-array,
Aerial squadrons that haste to the fray.

The eagles are coming!

Afar o'er the battle-swept plains of the east,
Their talons shall rend the foul heart of
the beast.

Swift, swift be their vengeance and dread
be their feast—

The eagles are coming!

O fools thrice besotted who plot and who
scheme

To stay the sure course of the oncoming
stream.

How futile your efforts, how baseless your
dream!

The eagles are coming!

O brothers who fight with the beast in
his lair,

Who breathe the fell fumes of his breath-
poisoned air,

Hold fast your high courage, yield not to
despair!

The eagles are coming!

Proud emblem of Liberty, gift most divine,
Fierce bird of the mountain, the forest, the

pine,
Our souls are aflame with that spirit of
thine.

The eagles are coming!

As day's rising beams chase the shadows
of night,

So swift be their pinions, resistless their
might.

Hail, heralds of Victory, Freedom, and
Light!

The eagles are coming!

FRANK L. ROSE.

Jackson, Mich.

SUCCESSFUL TREATMENT OF MALARIAL INFECTION

When I started in practice, I got in the
habit of putting many of my spare mo-

ments (had plenty of them!) into studying up some of the rarer diseases that we had to deal with. I would read up all I could find on one subject, then I would take some time in thinking it over, then I would formulate a plan of treatment and write it out in a pocket-notebook. In after-years, that old notebook helped me out of a good many difficult situations; and some of the best work I have ever done has come from those notes.

Living only nine miles from the Mississippi River, I expected to get a lot of malaria to treat and had a plan ready to hand for attack, but, it was many years before I ever saw a case. At last, the cases came, but, not the kind I had been looking for. I got in succession a number of patients with rather indefinite complaints, some of whom had been ailing for five or six years. They all complained of digestive troubles, some were slightly jaundiced, most of them had rheumatic pains and headaches, and every one of them complained of severe lumbar pains. I was unable to make out any cause for their troubles, so, I called in consultation, for one of the severest cases, an old doctor of Clinton who was quite popular in my community. And that old man gave me the best lesson on practical medicine that I ever got.

After examining the patient, he proceeded at once to tell me what to do. "But, doctor," I asked, "what ails the patient?" With a slight shrug of his shoulders, he just drawled, "Oh, I don't know." "But," I insisted, "how am I going to treat the man if I don't know what his ailment is?" With irritation in his voice, the old gentleman replied, "Well, young man, if you must know, you had better find out for yourself." The doctor was cross; but, as for myself, I was mad through and through, and as soon as he was gone I proceeded to follow his advice and find out for myself. I took my patient to Chicago and had Professor Knapp make a blood examination, and this revealed the cause of the whole mysterious trouble—the plasmodium malariae in plenty. Thus, all my cases were those of chronic malarial poisoning, and the way seemed clear for successful treatment.

As intimated before, I had nothing in my notebook on this subject and had to go to the textbooks for help; but, while I did secure some improvement, I failed to cure,

and, so, had to fall back on my old way of a period of study, then thinking out a plan of my own. And, after several trials, I finally evolved this prescription, which did the business most effectually:

Methylene-blue, medicinal (C. P. Merck).....	1 part
Sodium sulphocarbolate, C. P. (Merck).....	1 part
Salol.....	1 part
Acetanilid	1 part

Fill with this powder No. 1 capsules
 Directions: Take 1 such capsule after each meal. For some of the worst cases, I filled No. 0 size capsules. Of course, before prescribing these capsules, I would give the patient a good cleanout, using for this purpose three or four doses of a tablet containing calomel, 1-2 gr.; santonin, 1-2 gr.; podophyllin, 1-12 gr.; following this up with a few doses of a laxative saline.

Ten days of this treatment would free the blood entirely from the malarial parasite and all the clinical symptoms would disappear, when the patient would be dismissed with a good iron-and-arsenic tonic. During a period of three years, I treated 30 cases of this kind, all successfully.

Then intermittent fever of a rather severe type broke out in one of the nearby river-towns and one morning they brought a young woman to my office. She was just starting in with a chill. I had seen several cases of ague chills while I attended college, but, this one looked to me more like a continuous convulsion. It was simply impossible to count her pulse. I gave her at once a hypodermic injection of morphine, atropine, strychnine, and nitroglycerin, and as soon as this took effect the chill subsided, whereupon I took her temperature and found it to register 106, with pulse at 140. She was a well-built woman and before this sickness had been robust and had had a fine complexion; but, now she looked anything but robust and her complexion looked somewhat like a cross between saffron-tea and road-dust. She said she had had a chill like this every other day for a month and that the doctors at home could not stop them, although she said she had taken quinine till she thought it would ring her head off.

I gave her positive assurance that she need not have any more chills. She got a room at a nearby hotel, to stay a while for treatment; and now I was happy, for, I got my long-awaited-for chance at a se-

vere case of acute malarial fever. And this is what she got:

First, one of those calomel, santonin, and podophyllin tablets at 10, 11, 12, and 1 o'clock. Next, one tablespoonful of a saline laxative at 5 and at 6 o'clock. Next, an enema of glycerin and epsom salt in hot water at 8 p. m. By 9 p. m., her bowels had moved several times, and freely. At 10 p. m., she received 30 grains of quinine in capsules, 30 grains of potassium bromide in solution, 1 tablespoonful of paregoric, and 1 teacupful of hot red-pepper tea. In the morning, her attendant reported that she had slept soundly all night and woke up feeling pretty good. Before breakfast, she got another tablespoonful of the saline laxative. In addition, I gave her this mixture:

Hydrochloric acid, dilute	dr. 4
Tincture of nux vomica.....	dr. 4
Tincture of capsicum.....	dr. 4
Essence of pepsin, enough to make	oz. 4

Label: 1 teaspoonful in one-half glass of water after each meal.

The second night, she received 20 grains of quinine, 20 grains of potassium bromide, 1 tablespoonful of paregoric, a cup of pepper-tea.

The third night, she got 10 grains of quinine, 10 grains of potassium bromide, 1-2 tablespoonful of paregoric, and a cup of the hot tea.

The fourth day, I sent her home. I never have seen such a change in a patient in so short a time. She was looking and feeling just as well as she ever had in her life, and has remained well ever since.

I got only three more cases of the same type, neither quite so severe, and they all did just as well; not one ever made any complaint of any disagreeable symptoms from the treatment. However, these few cases are not enough to establish the value of the method, so, I still am looking for more cases, in the meantime making this report for others to try it out.

W. A. MARNER.

Miles, Ia.

perience in a case of "jim-jams" treated some thirty-odd years ago.

The patient, a lawyer of middle age, after celebrating a political victory rather too profusely, had an attack of the "jimmies," and his brother, on the advice of an old "yarb doctor," administered a teacupful of red-pepper tea. However, instead of relieving, this hot potion caused the greatest agonies imaginable, succeeded by the wildest delirium. The man continued in this condition, without sleep, for thirty-six hours before I saw him, although two other doctors had doped him to the limit with narcotics and used hot baths and everything else they could think of. When I arrived, it took two strong men to hold him on the bed. I proposed administering a hypodermic injection of nitrate of strychnine of $\frac{1}{8}$ of a grain. This, the other doctors said, would kill the man, most certainly; but, I persisted, and, as the family was anxious for me to take the case, they retired and I assumed the entire responsibility.

I administered the dose, and in ten minutes the patient was quiet and in fifteen minutes was sound asleep and continued to sleep for thirty hours without waking. When at last he awoke, he was perfectly rational, drank nearly a quart of water, arose, put on his clothes, went to the pantry, and proceeded to eat ravenously of some hog-jowl and turnip greens and corn pone. All the past, to the drinking of the pepper-tea, was a perfect blank to him. He ate his breakfast at the regular hour and went to his office to work, apparently normal.

I have used strychnine in large doses in several cases of delirium tremens and it always induced sleep—which is the absolutely necessary condition to be brought about in these cases of acute cerebral anemia.

J. T. MCCOLGAN.

Celina, Tenn.

HIGH-FREQUENCY CURRENT IN INTERCOSTAL NEURALGIA

Dr. L. B. Bates complains about the decrease in reports from the firing line. Complying with the editor's request, I will try to do my share. Here is my case.

A woman, aged 25, had severe intercostal neuralgia for two weeks. I tried all known pain-relievers, from the coun-

STRYCHNINE VERSUS CAPSICUM IN DELIRIUM TREMENS

On page 156 of the February number of CLINICAL MEDICINE, there is an article by C. S. Cope, on the use of capsicum in delirium tremens, and it calls to mind my ex-

ter-irritation with a Rigoll's to the most complex balms, ointments, and what not. At last I decided to try the high-frequency current over the Valleix points. After three treatments of about ten minutes each, the pain disappeared and has not returned.

Now, can anyone suggest a practical, simple treatment for x-ray burns in the face?

GEORGE E. TALBOT.

Montreal, Can.

GOAT'S MILK FOR BABIES AND INVALIDS

In reading THE AMERICAN JOURNAL OF CLINICAL MEDICINE, I see that the editor advocates the use of goats' milk for invalids and for babies that are not well nourished.

For a long time, I have been taken with the idea of prescribing goat's milk, princi-

malnutrition by having them take the milk fresh from the cow, that is, before it has lost its natural heat and when it has not had time to become filled with a host of bacteria foreign to the digestive processes in the intestinal canal of the child.



3 National Committee for the Prevention of Blindness, Inc., 130 East 22d Street, New York, N. Y.

Preservation of Vision.

pally because of the apparent immunity of these animals to diseases. Perhaps I owe my initial favor toward this employment of the milk of goats to the fact that for years past I have treated a great number of infants suffering from malassimilation and



2 National Committee for the Prevention of Blindness, Inc., 130 East 22d Street, New York, N. Y.

Preservation of Vision.

In this connection will you kindly indicate where I may obtain further information about this subject?

B. F. SHIRES.

Bedford, Pa.

[The Bureau of Animal Industry, Department of Agriculture, Washington, D. C., has published several pamphlets on the subject of raising goats and their use as milkers. These publications can be secured at cost from the Superintendent of Documents, Washington, D. C. Italy has developed several valuable breeds of milch goats: the Maltese are also good.—ED.]

THE RECOGNITION OF PAIN; ALSO, ABOUT THE PULSE

I once asked an ex-surgeon of the Army this question: "Suppose a man comes before you and says he is in pain, how can

you tell whether he is in pain or not?" His reply was: "You can't tell; you have to take his word for it."

I have made an important discovery in medical science, by determining the fact that when there is pain in any part of the body a certain tension of the pulse and contraction of the pupils of the eyes are observable. If there is noticeable no tension of the pulse and no contraction of the pupils, there is no pain.

I have also discovered that, in sick persons, there is a great difference between the pulse of the right wrist and of the left. The pulse of one wrist will tell us of the vitality, the constitution of the sick person; the pulse of the other wrist will tell us of the local disease (whatever that may happen to be), the real, the true condition of the patient. When the time comes, under proper treatment, that the pulse-beats in both wrists are alike, full, strong, and regular, we may know from this that the sick person is near being well.

In reading a person's pulse, we must always remember that Dame Nature is sending a message over the arterial "wire" and that it is our business to interpret the message correctly; if not, then so much the worse for us and for our patient.

I asked the same ex-surgeon of the army another question: "When a man comes before you and claims to be sick, how can you tell whether he is sick or well?" His reply was, "You can't tell without making a physical examination." I have learned this fact: when a person has a healthy complexion, a clear bright expression of the eyes; the tongue is light-red, moist, and clean; the pulse, full, strong, and regular; the muscles of the arm, firm, not flabby; then the person is in normal health.

These facts should be known to every doctor and every surgeon in the army and navy. It will detect malingerers every time and help the physician to find out the real and true condition of the person. A patient may try to deceive you; however, the pulse will tell you the truth. These are facts that have been verified by me in nearly fifty years of practice. There is more in this discovery than you may realize.

ELI G. JONES.

Buffalo, N. Y.

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[Comparatively little has been written that could guide us in the recognition or

diagnosis of pain, although several books have been devoted entirely to the subject of pain. Stanton's pretentious "Encyclopedia of Face and Form Reading" does not mention the word pain at all in its index. Butler, in "Diagnostics of Internal Medicine," dilates upon its importance for diagnosis, also upon its varieties and various characteristics, without, however, affording any guidance as to how its presence may be recognized. Musser, in his "Medical Diagnosis," devotes a little less than three pages to discussing the recognition of pain, referring to the mode of expression, the facial expression, the attitude of the reflex action, and the objective signs of disease. According to Fyfe ("Specific Diagnosis and Medication"), "pain or suffering is expressed in every portion of the body, and one may learn to recognize it as soon as the eyes strike the body; and, yet, it would be difficult to describe the expression," and he continues: "When pain is associated with, or the result of, undue excitation, the expression will be that of the excitation. But, if associated with or the result of an enfeebled condition, either of the entire body, the part suffering or the brain, the general expression may be quite the reverse, and will more resemble the exhaustion that follows excessive grief—one of anguish." And, further: "Pain and suffering are distinctly expressed in the features, yet not always in the same way. Firm contraction of the muscles is the most common expression. Thus, every reader will recollect the contracted brow as evidencing pain, especially pain with irritation of the nerve-centers. We involuntarily associate contraction of the structures about the eyes and the wrinkled skin with pain or with suffering. But, we have the evidence of pain in this region without muscular contraction; indeed, there is the reverse, drooping of the tissues, the expression is sad, of the exhaustion that follows excessive grief, and we are assured that there is enfeebled circulation in the brain, and the pain is the expression of atony." Cabot is the only author who refers to the pulse, having observed that "severe pain almost always carries a notable rise in blood pressure, and, if we find nothing of the kind, we may rightly conclude that, if pain is present, it is probably not intense." ("Differential Diagnosis.")

These are the only references that we have been able to find concerning the diag-

nosis of pain, and in none of them is any mention made of the state of the pupils.

It would be of interest to investigate and verify Doctor Jones's finding, that pain causes increased tension of the pulse and contraction of the pupils of the eyes; further, that the absence of increased pulse tension and of contracted pupil indicates the absence of pains because of the value of such a sign in the detection of malingering.

When Doctor Jones arrives at the conclusion that "the pulse of one wrist indicates the condition of vitality and of the constitution of the patient, while the pulse of the other wrist will tell us of the local disease, the real, the true condition of the patient," we can not follow him, since such a view, to us, seems more in keeping with the speculative philosophizing of medieval physicians, the Galenists, than in accord with actual discoveries of the bodily functions—their manifestations—of body and mind.

We are reminded of a passage to be found in the "Study of Medicine" by Dr John Mason Good (6th American edition, 1835), according to which this kind of differentiation in the doctrine of pulsation will "perplex pathology with a labyrinth in which the student is lost and the master wanders to no purpose." He quotes Frank ("De Curand. Hom. Morbis Epit.," tom. i. p. 30) as follows: "*Infida, arbitraria et equivoca est miltorum de pulsibus criticis doctrina.*" (Deceptive, arbitrary, and equivocal is the doctrine of many concerning the evaluation of the pulse). Doctor Good has a great deal more to say about arbitrary and artificial differentiation in the study of the pulse, but, nothing that would be of any particular value to us. The modern researches in this subject may be said to contradict directly any idea of the ancient view that the separate halves of the body, as represented, for instance, by right pulse and left pulse, regulate or govern different functions; and we can not bring ourselves to consider Doctor Jones' opinion seriously.

The question of malingering is an important one and one upon which much has been written. There is no doubt at all, of course, that "a healthy complexion, a clear and bright expression of the eyes, a light-red, moist and clean tongue, a full, strong and regular pulse, and firm muscles of the arm" indicate a state of health, while varia-

tion from these conditions means a pathologic state.—Ed.]

THE SPREAD OF GOITER

Doctor McCarrison's report on his research-investigations on goiter has not received, on this side of the Atlantic, the consideration it merits; for, he demonstrated that goiter can be communicated to goats by giving them water to drink that had been polluted by the excreta of goitrous persons.

This experiment demonstrates, first, that goitrous water can be prepared. Second, that the disease is communicable, and also third, that it is intercommunicable between mankind and animals. And, surely, a disease that can be transmitted back and forth without modification has infinite possibilities of being spread.

In the old open-range country, where goiter appears to be endemic, I find that the trouble affects cattle, horses, sheep, dogs, pigs, and goats, practically all the domestic animals, in addition to people. In grown cattle, the thyroid enlargement is but rarely, if ever, seen, but, in the calves, it is fairly common at birth, having been transmitted by the blood in gestation. The cow mother shows no sign of gland enlargement and the enlargement in the calf usually disappears some time after birth, and that without any treatment. Hence, we see that cattle are germ-carriers and transmit the germ through their blood; also, that the enlargement in calves is reabsorbed into its system, through the blood.

In horses, the thyroid enlargement rarely becomes apparent until they are aged. In the smaller domestic animals, the enlargement may be met with at any time, about the same as in people.

Attention has been called to the fact that goiter-bearing streams change, those bearing the infection becoming goiter-free, and conversely. This is caused by the presence or absence of goitrous animals in the watershed of the streams.

Messerli, of Switzerland, reported that he found an increase of goiter coincident with freshets in certain streams, and advanced the view that endemic goiter is related to the use of water to which the microbes have gained access. The germs from the excreta of goiter-bearing animals



Is any explanation called for?

can be carried into the streams by rains, thus corroborating his opinion.

The statement, that goiter disappears on changing the source of water supply, is not in conformity with the experience that persons from a nongoitrous country can visit a goitrous area and later return to a nongoitrous country, and subsequently develop goiter. Also, goiter, by hereditary transmission, has been found in persons of the third and even the fourth generation after removal from goiter-districts.

The germ giving rise to goiter may be one native to North America or it may have been imported and become acclimated and thence is spreading from the stock ranges.

The present prevalence of goiter in Pennsylvania can be accounted for by assuming that the germs of the disease have been brought in by natives of the goiter-areas of central Europe, who acted as carriers and distributors in the coal-mining areas of the

state, from whence, through their excrements, the germs made their way to the streams, when they were imbibed by animals and propagated and again spread wherever the animals excreted.

I, therefore, advance the theory that every person and every animal that has drank water containing goiter-germs becomes a potential goiter-germ carrier and distributor of the disease, irrespective of whether or not he has reached the stage of thyroid enlargement. So, now, with our perfected systems of transportation, there are few areas in the country that are not within reach of being contaminated by one or other of them.

North America is steadily but insidiously being encircled by this disease. It is now established in the West, in the Rocky Mountain region, in the North in Canada, and now in the East, in Pennsylvania, with numerous sporadic outbreaks in various



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parts of the country, to such an extent that there are few communities that do not harbor at least one or two cases. And, as each case forms a center from which the infection spreads, the disease bids fair to overrun the continent,

Sporadic goiter is the result of germs imbibed that have been transported by water or by other germ-carriers. If for any reason the germs multiply rapidly, the disease may progress from a sporadic to an endemic character.

Hereditary goiter is goiter transmitted through the mother's blood to the fetus in the womb.

T. G. RITCHIE.

Cochrane, Alberta, Canada.

[The writer of this communication, who is an L. R. C. S. of Edinburg (1872), has devoted much study to this question of the germ-etiology of goiter, which, seemingly, has received much support by more recent investigations. However that may be, it is undoubted that thyroid enlargement is far more frequent on this continent at present than it was thirty or even twenty years ago. This may be only apparent, owing to the fact that the present fashion decrees that women wear dresses with open necks. Still, the impression is strong that physicians are being consulted more frequently nowadays for this affliction than they were formerly; and it is desirable to establish the exact etiology, in order to elaborate a reasonable causal treatment and prophylaxis.—Ed.]

GERMANY'S GREAT SECRET

An editorial under the above caption in the February issue of *CLINICAL MEDICINE*, "lays the fence down" for a little wholesome talk that is too inviting to resist. It says: "This war is a religious crusade;" then, on page 109 "stripped of its wordy camouflage," it tells (?) "the secret" in some 185 words. This editorial wants to say that Germany is on the anti and the allies are on the pro side of this religious battle. All (but the Kaiser) admit that Germany started the fight; that he had the tools and wanted to use them; that the most favorable conditions existed at the time for his success. All admit that the motive was for the existence of autocracy against democracy, the ruler against the ruled, the king against the subject. All admit that the allies are fighting for "liberty." Liberty against what? Answer: Liberation from the prospect of being ruled and exploited. All admit that, had there been no rulers, the people would not have waged war. Why? Answer: Because the processes of human life and of evolution lead toward peace, democracy, enlightenment, and self-government. All admit that, since the discovery and use of power (beginning with steam) the world has been welded together into one community and distance has practically been

annihilated. All admit that so rapidly has the world progressed in commercial and social lines, which lead to self-government and democracy, that the "one-man ruler" might soon be looking for a job.

But, where is the religious crusade the editorialist wants to bring to light? All admit that every war in the world, down to the confederate rebellion, was either a purely religious war or had underlying religious fanaticism playing a "full hand." Why not try to deal with fact, and not muddy the puddle, and worse by stirring in a lot of opinions based solely upon hypothesis?

In fact, religion, as such, is playing no hand in this fight; rather, it will justly suffer its share of loss of prestige and power along with the rest of the kings. "King" Religion, during a certain period of the biological process of human nature, was a necessary evil, as also was King Ruler. Man had to be forced to be moral, by some power greater than his will, so that he could know the good of morality. The Christian religion has been the most favorable to the advancement of mankind, because it is a democratic religion. It gives the subject a right to his own choice (believe and be baptized or go to hell—which is entirely optional). Most other religions compel acceptance, and nonconformists are led to the chopblock by the neck. This is pure despotism.

You will say, "I do as I please about religion." I tell you flatly that you do not, if you succeed in business. I dare any doctor who will say that to locate in a new town and publicly assert that he is an atheist or infidel. He will not succeed. It makes no difference whether you are an Alexis Carrel or a present-day Hippocrates. There are enough religious fanatics in every community who would die before they would employ you, in order to defeat you.

Happily, this war will improve that condition. You take a bunch of us army doctors, and you will find us getting together and talking freely, with the assurance that we shall not have our discharge handed to us the next minute, even though the truth be coming out of our souls just as we see it. And you will not be slow to form a conclusion. If liberty is not to be complete, including religious liberty, the price we are paying is too dear.

A physician, to be successful, has to affiliate with some one of the branches of

the Christian religion, the Masons, Odd Fellows, Elks, and belong to all the town clubs and such, solely for the purpose of getting a "standin" for business, or else stultify his conscience by playing shut-mouth. The same holds good for almost all other lines of business.

Can you see a chance for improvement directly crossing to this armed conflict of the worldwide nature? Let us see! What is the Y. M. C. A. doing? It is not the standard-bearer of a religion, certainly, albeit, still bearing the adjective "Christian." It is growing like a bay-tree. Every soldier in this army "swears by it." This same is true of the Knights of Columbus. If this war lasts three years, the Y. M. C. A. will be the largest moral organization in the world, and it will keep on growing.

And what are the army surgeons doing? They are getting in touch with each other in the manner that could not have been possible any other way. These men never will be satisfied to reenter private practice again, but, will start up team-work with a regular organization, very much like the dreamer's "Medical Utopia" that was depicted in *CLINICAL MEDICINE* some time ago, and which the editor relegated to the advertising pages—not willing (I presume) to fill his journal's space with such a myth.

While we are paying for it, let us see to it that we receive "the goods."

T. H. STANDLEE,

San Antonio, Tex. 1st Lt., M. R. C.

[There do not seem to be any real differences between Doctor Standlee and myself; merely a question of terms and a misunderstanding about intentions. The fact is, the doctor's letter is a powerful brief in support of my contention that the issue at the root of the war is a religious issue: for all the things which he declares to be at stake in this struggle—democracy, liberty, self-government, yes, and even the overthrow of the false autocratic "King Religion" which he believes will be one of the outcomes of this war—all these things are religious issues. Religious, not in the sense of being Protestant or Catholic, or, so far as that is concerned, even Christian, but, in the sense of representing the spiritual idealistic forces which make for just the conditions to which Doctor Standlee looks forward.

The only misunderstanding between you and me, dear doctor, is concerning what I

mean by religion. I do not mean what is popularly or technically called by that name. I mean, on the contrary, all those things which you idealize. Just as I said at the close of my editorial—righteousness, and fairness, and virtue, and honor, and the brotherhood of man, and the rights of the weak, and truthfulness, and justice—these are what I mean by religion. Democracy itself is a religious issue. You say, the struggle is between democracy and autocracy. But, that does not touch essential principles. Democracy and autocracy are mere modes, mere local applications of certain principles to particular cases, to wit, to national and civic government. Back of autocracy and democracy lie the principles, respectively, of dog-eat-dog and of the brotherhood of man. And these are religious principles.

This truth has been rapidly dawning upon the democracies of the world since they began their death-struggle with autocracy. Taking up arms in defense of their national existence, they have come to realize that their life consisteth, not in the things that they possess, but, in the soul of democracy itself, which is the brotherhood of man. Whatever may have been the former conceptions of democracy, this is unquestionably the democracy of the future, to which all the nations of the earth are steadily converging. And this is what I mean by religion. If, as you say, doctor (and I thoroughly agree with you), technical religion stands in the way of the realization of this ideal, then technical religion will have to go by the board and make way for the true religion of democracy, and liberty, and genuine brotherhood; and, as you yourself point out, one of the chief issues of this war is, to bring about this state of affairs. Well, that's a religious issue, isn't it? So, we agree, and will go out to dinner together, after all.—Ed.]

THE CHICAGO SESSION OF THE AMERICAN MEDICAL ASSOCIATION, JUNE 10 TO 14

Committee on Arrangements.—The Local Committee on Arrangements for the annual session of 1918, to be held in Chicago, June 10 to 14 is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association

and their guests who will attend this meeting of the American Medical Association.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington street, Chicago.

Clinics.—The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday, and Saturday, June 6, 7, and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns as occasion warrants.

Alumni and Section Dinners.—Alumni and section dinners will be held Wednesday evening from 6 to 8 o'clock so as not to conflict with other events that are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is cooperating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

The meetings of the sections will be held in various hotels, particulars being obtainable on registration.

The general headquarters of the session will be at the Hotel Sherman, corner North Clark and Randolph streets, where Fellows of the American Medical Association will register and receive their programs. In the same place, will be located the scientific and commercial exhibits, as well as the information bureau.

THE MEDICAL RESERVE CORPS

The Surgeon General of the United States Army has asked us to publish the following appeal:

"I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for more officers each day becomes more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

"Therefore, I bring to the attention of the profession at large the necessity for

additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

"Within the next two or three months the second draft will be made, to be followed by other drafts each of which will require its proportionate number of medical officers. At this time the available list of the Reserve Corps contains an insufficient number of officers to meet the demands of this draft.

"I cannot emphasize too strongly the supreme demand for medical officers. It is not now a question of a few hundred medical men volunteering for service, but, it is a question of the mobilization of the profession that in the large centers of population and at other convenient points, as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

"The requirements for commission in the Medical Reserve Corps are, that the applicant be a male citizen of the United States, a graduate of a reputable school of medicine, between 22 and 55 years of age, and professionally, morally and physically qualified for service.

W. C. GORGAS,

Surgeon General, U. S. Army.

Washington, D. C.

[It should hardly need any remarks on our part in support of this appeal for more medical officers. The medical service of the army is so vital a part of our fighting equipment that the need, the absolute necessity of a medical personnel sufficient for all requirements of the army is self-evident. Even at the possible cost of a smaller sup-

ply of physicians at home, the needs of the army and navy must be supplied. This is the primary and most important duty before us. Won't you, every one who can at all be spared from home, make up your mind now, NOW, to apply for a commission in the Medical Reserve Corps?—Ed.]

REEDUCATION AND REHABILITATION OF DISABLED SOLDIERS

At the forthcoming meeting of the American Medical Association, to be held in Chicago, June 10 to 14, the section on miscellaneous topics will take up the subject of reeducation and rehabilitation of disabled soldiers. Physicians who contemplate attending this meeting of the American Medical Association will find the program for the meetings of this section on the various blackboards, and they are urged to attend, because of the great importance of this undertaking.

A TREATMENT OF BURNS AND VARICOSE ULCERS WITH WAX DRESSINGS

My attention was first called to the paraffin dressing on receiving a letter from a former classmate, who was in charge of an American hospital in France, mentioning the success that the surgeons of both France and England were having with the application in the burns received while in battle with the Germans and suggested that I try it in my next case. He also sends me a sample of what he was using, which I used on my first case, after that, I ordered one of the American waxes, which consists of paraffin, combined with vegetable and mineral resins and vegetable wax, so as to modify its physical character as regards plasticity, elasticity, and adhesiveness; while 2 percent of eucalyptol is added, to cover the disagreeable odor always present from the burned surfaces.

My mode of application is as follows: Thoroughly cleanse the wound with Dakin's solution, $\frac{1}{4}$ percent, then dry the surface (if in the office, with an electric-fan dryer). When dry, spray on the melted wax with a thermos atomizer or paint it on with a large camelshair brush, and this solidifies quickly on the wound and outlying edges, giving a smooth, glossy, waxy surface. To this, I apply a very thin layer of absorbent cotton, then spray or paint on a second

layer of wax; this forming an airtight and closely adherent cast, under which the growth of new skin is quickly formed.

The advantage of this dressing over the former dressings of hydrogen peroxide, carron oil, castor-oil, linseed-oil, and ointments is, that it is easy to apply, that patients receive almost instant relief from pain, does not soil clothing like the other dressings. Moreover, it is so very easy to remove dressing; just raise the edge and it comes off in one cast, with no adhesion or disturbance and with little or no pain to the patient, and this feature alone is a great advantage of the old methods.

The following cases are of interest because of the short time required for repair great advantage over the old methods.

Case 1. Mrs. B had on the stove a 1-gallon Karo syrup-can half full of syrup and apples cooking. In trying to remove the tight cover the latter flew off and the contents went all over her face and neck, very severely scalding her. She was brought to the hospital, eyes so swollen she could not see and there was one complete blister all over her face and neck. The serum was let out, the skin clipped off and the wax was painted on, after first cleaning with the Carrel-Dakin solution, and in a few minutes she was free from pain. She was redressed daily for ten days, when she was discharged as well. There is not a sign of a scar-tissue; in fact, two wrinkles under her eyes have disappeared.

Case 2. A negro boy, age 17, fell backward into a fireplace, burning his clothing all off, this resulting in a severe burn of the second degree from the shoulder to the lumbar region. He was dressed by a Negro granny, for five days, with pigs' grease and pine resin, when it became so bad that he had to come to the hospital for treatment. I found that moist gangrene had set in and the odor was so bad you could smell it all over the hospital. I removed the grease-resin with ether and gasoline, then curetted the parts thoroughly to a clean surface, then used Carrel-Dakin solution, dried, and lastly applied the wax dressing. This was removed daily for two weeks, the wound improving each day, when he failed to return. Running across him one day a month later, I asked him why he did not return for treatment. He said, "Boss Doctor, she done all well." Taking him to the office, I found it was true; a new growth of skin had formed.

Case 3. Mrs. D. was at supper when she caught her dress-sleeve in teapot, spilling the tea all over her thighs. She sent for some salve and applied it for eight days, then the odor and pain became so bad she telephoned for me. I found places to be in a very serious condition, the odor being very offensive. I cleaned with the Carrel-Dakin solution and then applied wax dressing. I have done so for the past four days and find a remarkable change for the better—no pain, no odor, and there is indication of a quick recovery.

Case 4. A Negro, age 50. His hand was caught in a belt of the mill, the friction burning off the flesh to the bones. It was dressed at home for five days with pine resin, when the pain became so severe he could not bear it. When he came for treatment, the odor was so disagreeable we had to spray aromatic oils after he left the room. I curetted out the old dead tissue, and he was treated as the preceding cases. He has had seven treatments and now is practically well.

Case 5. A woman, about 50, was carrying a kettle of hot water, when she stumbled and was thrown down, causing the water to go all over her face, neck, and hand. I found her in great pain. I applied Carrel-Dakin solution and the wax dressing, and have done this for the past four days. The pain was relieved at the first dressing. There is no odor, and there is indication of no scar-tissue forming.

Case 6. Mr. R. has had varicose ulcers for the past fifteen years and has had treatment at hospitals north and south at different times, but the ulcers were getting worse all the time, larger and deeper, and he could work only half of the time. I removed the old tissue, applied packs of C-D solution for three days, then started the wax dressing. He was dressed for

two weeks daily, when the tissue was healed over, and then I applied the high-frequency current every other day for two weeks, and now he sees his leg without an ulcer for the first time in ten years.

Case 7. Mr. B. had varicose of the shin extending from the lower third up to the knee. He had been to various hospitals in the middle and eastern states for treatment. He would get some relief from pain, but, was unable to get the ulcers healed over. I applied C-D solution as above and then the wax dressing. He was about his work in a few days, but, his work was such he would break the dressing loose or hit the ulcer. So, after dressing as before, I applied a wire gauze splint bandage, applying the wax also to this, then a cotton gauze bandage. It was completely healed in twenty dressings afterward.

CHARLES WILLIAM LARRABEE.

Helen, Ga.

TOXIC ARSPHENAMINE

The director of the Hygienic Laboratory of the Treasury Department, Washington, D. C., calls attention to reports published in current medical literature, of untoward results following the use of arsphenamine and neoarsphenamine. It is requested that samples of any lots of these arsenicals that have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples, it should be made certain that the lot number is the same as that of the ampules in question. The samples sent should, if possible, be accompanied by a brief note stating the approximate body-weight and age of the patient, the dose and dilution of the drug given, the symptoms and final result; that is, whether fatal or not.



In the World War

ARMY MEDICAL CORPS EXAMINATIONS

The Surgeon General of the Army announces that preliminary examinations for the appointment of first lieutenants in the Medical Corps, U. S. Army, are being held at numerous points throughout the United States, on the first Monday of each month.

Full information concerning the examination may be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation to report for examination are that the applicant shall be a citizen of the United States, between 22 and 32 years of age, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, of good moral character and habits, and shall have had at least one year's post-graduate hospital internship.

The government cannot pay to applicants any portion of their expenses incurred in connection with their examination, and due consideration, therefore will be given to localities from which applications are received, in order to lessen such expenses as much as possible.

Chemistry and Physics have been eliminated as subjects of the examination.

Those applicants who successfully pass the examination are commissioned first lieutenants in the Medical Reserve Corps, and sent to either the Army Medical School in Washington, or to a training camp for a course of instruction, covering a period of approximately three months, during which time they draw the pay and allowances of their grade. If, at the close of their instruction, they pass the final examination, and are favorably recommended, they are commissioned first lieutenants in the Medical Corps of the Regular Army.

The Medical Corps consists of commissioned officers in number approximately equal to seven for every one thousand of

the total enlisted strength of the Regular Army authorized from time to time by law, proportionally distributed among the graded and in the ratios as follows: Colonels, 3.16 per cent.; lieutenant colonels, 5.42 per cent.; majors 23.7 per cent.; captains and first lieutenants, 67.72 per cent.

Promotion to the grades of major, lieutenant colonel, and colonel is by seniority, subject to examination.

The Surgeon General, who, under the present law has the rank of brigadier general and is the chief of the Medical Department, is selected from among the officers of the Medical Corps not below the grade of lieutenant colonel.

As to Pay and Emoluments

To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by 10 per cent. for each period of 5 years' service until a maximum of 40 per cent. is reached. A first lieutenant receives \$2,000 per annum, or \$166.66 monthly. At the end of five years (*during the period of the war, at the end of one year*) he is promoted to captain, subject to examination, and receives \$2,400 a year, with an increase of 10 per cent. after five years' service, making \$2,640, or \$220 per month. After 10 years' service the pay would be \$2,880 annually, or \$240 per month. The pay attached to the rank of major is \$3000 a year, which, with 10 per cent. added for each five years' service, becomes \$3,600 after 10 years' service, \$3,900 after 15 years' service, and \$4,000 after 20 years. The maximum monthly pay of lieutenant colonel, colonel, and brigadier general is \$375, \$416.66, and \$500, respectively. Officers, in addition to their pay proper, are furnished with allowance of quarters according to rank either in kind, or, where no suitable Government building is available, by commutation: fuel and light therefor are also provided. When traveling on duty an officer receives mileage for the

distance traveled, including the travel performed in joining first station after appointment as first lieutenant. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at Government expense. Groceries and other articles may be purchased from the commissary at about wholesale cost price. Instruments and appliances are furnished for the use of medical officers in the performance of their duties. Well-selected profes-

ity incurred in the line of duty. On attaining the age of 62 years officers go on the retired list by operation of law. Retired officers receive three-fourths of the pay of their grade (salary and increase) at the time of retirement.

At the present time there are approximately seven hundred vacancies in the Medical Corps.

THE NEEDS OF THE MEDICAL SERVICE

Before the last meeting of the Southern Medical Association, Lieut-Col. R. E. Noble, M. C., U. S. A., presented a paper which convincingly answers the many questions that have caused perplexing hours of thought to many doctors. The com-



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A traveling dental office—in an automobile.

sional libraries are supplied to each hospital, and standard modern publications on medical and surgical subjects, including medical journals are added from time to time. At each military post there is also a laboratory, and medical officers are encouraged to carry on any special line of professional study which appeals to them and which fits them for their duties as medical officers.

Officers of the Medical Corps are entitled to the privilege of retirement after 40 years' service, or at any time for disabil-



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American Troops Ready for Gas Attack.

munication appears in full in the December issue of *The Southern Medical Journal* and should be read by every doctor in this country. In a previous paper, the same writer declared that "the medical profession has a heavy responsibility, for, with it rests the subject of medical preparedness."

We have not a sufficient number of medical officers to care for the combatant and other forces now in training. With the new draft soon to be called and the possibility of the raising of an army of between five and ten million, as has been authoritatively foreshadowed, we must become deeply conscious of our responsibility and worthy of the trust placed in us.

The responsibility of the medical profession of the United States and its importance in the successful outcome of the war can not be too forcibly impressed upon every doctor who is mentally and physically

fit and within the age limit, and each one is urged to offer his services now.

That the Surgeon-General should have an immense corps of medical-reserve officers upon which to draw, enabling him to place the individual where he will be best fitted for the service, is, manifestly, apparent. This will mean efficiency, and by efficiency alone can the responsibility now resting upon the medical profession of this country be lessened.

Apply at once for a commission in the Medical Reserve Corps and thus relieve the responsibility which you owe to your country, your profession, and yourself.

VOCATIONAL TRAINING OF DISABLED SOLDIERS AND SAILORS

That 100,000 out of every 1,000,000 soldiers sent overseas will return disabled to the United States during the first year of fighting, and that 20,000 of these will need some kind of vocational reeducation or rehabilitation, is the estimate made by the Federal Board for Vocational Education, in Senate Document 166.

"Long before the close of activities in the summer of 1918, the return of men will be-

occupations of every disabled soldier and sailor is presented by the federal board. This plan involves a central administrative agency at Washington, the coordination with that agency of every federal and state agency concerned and with similar public, semipublic and private agencies, the establishment of "curative workshops" for the treatment of war-cripples, together with a



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American Ambulances and Drivers in Milan, Italy.



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Tests for Mentality.

gin; and vocational reeducation must start with the first men sent back, and must be developed as the number of men in hand for training increases," declares the report. "The development of facilities for undertaking vocational reeducation must, in fact, anticipate the return of the men, since adequate provision cannot be improvised after the men are actually in hand for training."

A comprehensive federal system for the reeducation and placement in wage-earning

complete system providing for subsistence and pay of the crippled soldiers during the period of reeducation.

Basing its opinion upon foreign experience, the report declares that "vocational rehabilitation can not be regarded as costing the community, except temporarily, anything whatever. The disability of the soldier or sailor is an economic handicap reducing productive power. Unless the men are vocationally reestablished, and to the extent that they are not completely reestablished, the economic loss to the community will be cumulative during a long period of years. Even a slight increase in vocational capacity, as a result of vocational training initiated during the period of convalescence, will result in an economic gain which, also, will be cumulative over a long period. This aggregate cumulative gain

will certainly exceed any expenditures for vocational rehabilitation."

The increase of the earning-power of the handicapped man, thus rendering him economically independent, is the ultimate object of this program.

The plea is made that "all the experience and all the special equipment required for

Disabled Soldiers and Sailors—Training of Teachers for Occupational Therapy."

Emphasis is placed on the immediate and pressing demand for the training of teachers of occupational therapy to take care of the handicapped men on their return from France. It is estimated that, for every 1,000,000 men overseas, a minimum of 1,200 teachers will be needed. What, in view of the experience of the belligerent countries, must be the qualifications of these teachers, how they may be trained, what problems are to be met, and how they are to be met in the course of vocational rehabilitation, the social and economic as-



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French Prisoners of War Interned in Switzerland Occupied in Making Toys.

emergency war work will be needed to provide for similar work in the vocational rehabilitation of men disabled in factories and workshops, of the victims of accident in all dangerous employment, and of the thousands of otherwise injured and crippled persons thrown upon the community each year. The number of such persons in normal times greatly exceeds the capacity thus far developed for their vocational rehabilitation."

In addition to the above, the document discusses methods of financing, organizing, and administering a national system of vocational rehabilitation; foreign experience and legislation are reviewed; and the proceedings of an interdepartmental conference held on the subject in Washington are summarized, together with suggested legislation.

REHABILITATION OF DISABLED SOLDIERS AND SAILORS

The vocational and educational problems involved in the rehabilitation of disabled soldiers and sailors are analyzed and discussed by the Federal Board for Vocational Education in Senate Document 167, just published under the title, "Rehabilitation of



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French Soldier With Two Artificial Arms Learning to Saw Wood.

pects of rehabilitation, and the need for a national system for the rehabilitation of the maimed and crippled in industry as well as in war are the main topics of the bulletin. The document is written by Elizabeth G. Upham, under the direction of Charles H. Winslow, assistant director for research of the Federal Board.

The emergency program outlined in the report is summarized as follows:

The returned disabled men are divided into four classes: (1) those who are permanently invalided, (2) those who are able

to work, but can not engage in competitive occupations, (3) those who must learn new occupations in the light of their handicaps, (4) those who are able to return to their former occupations. About 30 percent of all the disabled fall into the fourth group, and about 20 percent into the third group. The first two groups are relatively small.

For group 1, the treatment prescribed is, "invalid occupations," which are occupations that help pass the time and save the patient from brooding. For group 2, those who will, in all probability, be unable to compete in any line of work, simple occupations are prescribed to be carried on under the guidance of occupational therapists. Such occupations as wicker-furniture-making, chair-caning, toy-making and semi-trades will be taught these men.

For the 20 percent who must learn new occupations, a more elaborate course of rehabilitation is suggested. This will include simple occupations, such as are taught to the men of the second group, followed by courses in general education wherever necessary, and followed in turn by pre-vocational education, that is to say, elementary vocational education; and, lastly, by vocational education in whatever line is best adapted to the qualifications and handicap of the man.

A similar curriculum is proposed for the 30 percent who will probably be able to return to their old occupations. Under the lead of the occupational therapist, the patient will be gradually taught simple occupations, his general education will be "brushed up" and the deficiencies supplied, and he will be reeducated so as to enable him to resume his former trade despite his handicap.

The Federal Board presents in this bulletin an outline of an emergency course covering eight weeks for the training of teachers who are to handle all four groups of disabled men. It is expected that a certain percentage of the disabled men themselves will serve as instructors. Nurses and teachers of arts and crafts will be available for the invalid occupation work; trained and selected women of education with previous experience in the arts, crafts, and the semitrades will be drawn upon to teach simple occupations to group 2. In addition to these, there will be need in groups 3 and 4 of vocational teachers, preferably men,

and men and women teachers in general education subjects, instructors in manual training, commercial subjects, mechanical drawing, drafting, et cetera. Teachers of each group should have had practical experience in hospitals or institutions, and it is recommended that teachers in groups 3 and 4 should have experience in the same line of work as in the military hospitals of Canada.

That every dollar invested by the Government in the vocational rehabilitation of disabled soldiers and sailors will bring handsome returns in national efficiency, is maintained in the report.

"If the war should finally end in economic exhaustion," says the report, "that nation will ultimately triumph which is best able to use over again its men. It is claimed that Germany uses 85 to 90 percent of its disabled men back of the lines, and that the majority of the remaining 10 to 15 percent are entirely self-supporting. Belgium, whose depletion has been the greatest, was the first nation successfully to use over again its men. Not only has the large Belgium reeducation-center of Port Villez been self-supporting, but, in addition, it has paid back to the Belgium government the entire capital cost of installation. Economic necessity has made possible the results achieved in Belgium. For the other nations not so hard pressed, the rehabilitation of the disabled and the strengthening of the vitality of the civil population may be an important and perhaps a determining point in their economic future. It is certain that our own economic future depends to a large extent upon the rehabilitation of those disabled both in war and industry."

The bulletin discusses at length the possibilities of development of occupational therapy and the equipment needed for all the groups described. Suggested blanks for keeping the records in the curative workshops and for hospital registration are included.

WAR AND NAVY DEPARTMENTS COMMISSIONS ON TRAINING CAMP ACTIVITIES

We are informed that the War and Navy Departments Commissions on Training Camp Activities have formed a Social Hygiene Division under the head of Major

William F. Snow of the Surgeon General's office. The work of the division will be entirely educational, and will be divided into three sections with Drs. Davis, Zinsser and Clarke as directors.

Section one will be under the direction of Lieut. Walter Clarke, who will continue the educational work that he has been doing in the cantonments of the country for some time with the full cooperation of the War Department. Lieutenant Clarke supervises a large staff of lecturers on social hygiene. The lectures given are compulsory with the men in the camps, and exhibits and literature are used in connection with them.

Section two, to be known as the section on Men's Work, will have as its director William H. Zinsser, and will concern itself with the education of men in civilian communities. This work was formerly under the direction of the Council of National Defense, but is now transferred to the Social Hygiene Division under the Commission on Training Camp Activities.

Dr. Katherine B. Davis will direct section three, which has as its purpose the education of women and girls. In connection with this work a lecture bureau will be maintained in cooperation with the Social Morality Committee of the War Work Council of the National Y. W. C. A., the American Social Hygiene Association and similar organizations, which have also previously cooperated with the directors of sections one and two in their work. This bureau will supply lecturers to groups of women and girls in all parts of the country and furnish them with literature and exhibits. The work of this section will be intensive in industrial communities as well as in communities adjacent to camps.

SCHOOL INSPECTION IN EXTRA-CANTONMENT ZONES

We learn from a recent number of *Public Health Reports* that medical inspection of school children is one of the activities undertaken by the United States Health Service, to prevent the carrying of communicable diseases to the troops. Such inspection has already been started in practically all of the zones surrounding the army cantonments.

An officer of the service is detailed to give his full time to the work and has an

office and the assistance of school nurses or other help. The expenses, as a rule, are met jointly by the Red Cross, the local health authorities, and the Public Health Service. Regular inspection of the work is carried on by a service expert familiar with the best standards of school hygiene.

In but few of the places where this work has been begun had school inspection been previously practiced and in none had the full-time service of a physician been devoted to it. Now, with a skilled officer giving his full time to the work in each locality, much is expected to be accomplished. In communities where school inspection has been adequately carried out, the result has been a remarkable reduction in the incidence of contagious diseases in the general population. The same result is expected around the cantonments.

The plan is for the service officer and nurse, through co-operation with the teachers, to keep a close watch upon each school for the early detection of contagious diseases. The parents are then notified, the quarantine rules are enforced, vaccination is practiced where it fits the case, and all possible is done to prevent the disease from reaching the cantonment.

The protection of the troops is the great benefits to be derived from school inspection but others are not overlooked. While all children in the areas around the cantonments are examined at intervals frequently for communicable disease, they are also to be examined at least once a year for physical defects. These defects tend to lower individual resistance and increase the susceptibility of a child to contagious diseases; they also retard intellectual development and prepare the way for degenerative diseases in later life. When the defects are found, the parents are informed and urged to have them corrected. The great number debarred from the army and navy recently, because of physical disability, indicates that many such defects, which could have been corrected in childhood had they been known, remained uncorrected, with a resulting loss in national efficiency at this crucial moment.

This is a work that commends itself to every physician, to every citizen, as productive of good results in various directions. It deserves our wholesouled support.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

IN my reading this winter, I have been interested in the allusions to doctors, which I have found scattered here and there through the various volumes I have perused. An author's comments on members of our profession may be as interesting to you as they have been to me, so this month I will quote a few of them.

Here is something from the *Journal Intime* of Henri Frederic Amiel. In August, 1873, he was indisposed and consulted a physician. He has the following to say about doctors:

"Why do doctors so often make mistakes? Because they are not sufficiently individual in their diagnosis or their treatment. They class a sick man under some given department of their nosology, whereas every invalid is really a special case, a unique example. How is it possible that so coarse a method of sifting should produce judicious therapeutics? Every illness is a factor simple or complex, which is multiplied by a second factor, invariably complex—the individual, that is to say, who is suffering from it—so that the result is a special problem, demanding a special solution; the more so the greater the remoteness of the patient from childhood or from country life. The principal grievance which I have against doctors is, that they neglect the real problem, which is, to seize the unity of the individual who claims their care. Their methods of investigation are far too elementary; a doctor who does not read you to the bottom is ignorant of essentials. To me, the ideal doctor would be a man endowed with profound knowledge of life and of the soul, intuitively divining any suffering or disorder of whatever kind, and restoring peace by his mere presence. Such a doctor is possible. But, the greater number of them lack the higher and inner life, they know nothing of the transcendent laboratories of

nature; they seem to me superficial, profane, strangers to divine things, destitute of intuition and sympathy. The model doctor should be at once a genius, a saint, a man of God."

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In the first book that Thoreau published—"A Week on the Concord and Merrimack Rivers"—he wrote (August, 1839) in part as follows:

"There are sure to be two prescriptions diametrically opposite. Stuff a cold and starve a cold are but two ways. They are the two practices always in full blast. Yet, you must take advice of the one school as if there were no other. In respect to religion and the healing art, all nations are still in a state of barbarism. In the most civilized countries, the priest is still but a Powwow and the physician a Great Medicine. Consider the deference which is everywhere paid to a doctor's opinion. Nothing more strikingly betrays the credulity of mankind than medicine. Quackery is a thing universal and universally successful. In this case, it becomes literally true that no imposition is too great for the credulity of men. Priests and physicians should never look one another in the face. They have no common ground nor is there any to mediate between them. When the one comes, the other goes. They could not come together without laughter or a significant silence, for, the one's profession is a satire on the other's, and either's success would be the other's failure. It is wonderful that the physician should ever die and that the priest should ever live. Why is it that the priest is never called to consult with the physician? Is it because men believe practically that matter is independent of spirit? But, what is quackery? It is commonly an attempt to cure the diseases of a man by addressing his body alone. There is need of a physician who shall minister to both, soul

and body, at once, that is, to man. Now he falls between two stools."

—
We still are in need of such physicians. When will the profession learn that there is something beyond what we can determine by physical examination and laboratory analysis? In a delightful book, "A Journey to Nature," by J. P. Mowbray, and which I heartily recommend to every doctor, I am introduced, in the first chapter—"Scared to Life"—to a very sensible and honest doctor, who, instead of keeping his overwrought patient in town and filling him full of drugs, sent him up to the Catskills for a year's rest. The broker having sent for the doctor, the following conversation (in part) took place:

"What chance have I got?"

The doctor looked at me a moment very much as if he hesitated to tell me the truth. Then he said:

"Well, my boy, it's a tossup whether you live to be seventy-five or drop dead within six months."

I felt a nerve in my face twitch, and he went on:

"I suppose I ought to congratulate you. It isn't every one who has the privilege of going down bow first, all sails set, at full speed, without committing suicide."

I asked him plainly if he could help my chances.

"No," he said bluntly. "It would be an impertinence for me to disturb the intimacy which you have established with sudden death. Besides, mortuary neatness and despatch have been very much maligned. Some men are meant to live right up to the stopping-point, take all there is of life and then exit quickly and quietly without any fuss. It's quite characteristic of the business man of our era. It's what somebody has called eliminating the corporal superfluities."

"Then I am liable to die at any moment, doctor?"

"Why, of course! But, you needn't preen yourself. It's a very common privilege in Wall Street. You prefer it, don't you? I've seen a good deal of dying, and I must say that, as a rule, most of the attempts are tiresome bites at a cherry."

"Doctor," I said, "you will pardon me. I don't quite take your view of it. I prefer to linger and suffer a little. I sent for you,

because you are a doctor, not, a philosopher. What can you do for me?"

"Nothing, except to give the undertaker a clean bill of voluntary *felo de se*. There's only one thing will save you."

"Ah, what is it?"

"A miracle."

"Good heavens, doctor!"

"Yes, sir. Perhaps you have heard the dynamic asses of the world say that a man can not lift himself by his own waistband. I suppose it's true. When you can do that, you will live to be seventy-five—if that's any comfort to you."

"You are brutally frank. I suppose I must submit to my doom; but, I didn't send for you to sentence me."

"Sentence you? Confound it, you sent for me to make a monkey of me. What would you think of a man who ate cyanide of mercury every morning and sent for me to give him some medicine that would prolong his life?"

"You can not give me any treatment—is that it?"

"Yes, I can. I can put the whole pharmacopeia into one word and give it to you, but, you will not take it. It's bitter, but, it might cure you."

"Give it to me."

"Stop!"

"Do you mean, give up my business?"

"Give up everything. Stop living for a year, and live. If you don't want to die, let Wall Street die. You can not both live together."

"Am I to understand that I can avert an organic disaster with care?"

"No, you are bringing it on with care. Stop caring. Go away. Forget—and you will lift yourself by your waistband out of an early grave."

The patient took this excellent advice of the doctor and went up into the Catskill mountains. Some months after, the Doctor paid him a visit, and here is a bit of their conversation:

"How do you sleep?" asked the Doctor. "Do you know?"

"No, I have lost interest in the operation."

"Good! Can you eat without a menu and stop without tipping somebody? Good! Does salt junk at certain ecstatic moments look to your purged vision like the staff of life? Good. You can't spread the morn-

ing paper out beside your plate and cram your stomach at the same time? Good. You'll live to be eighty-five if you keep on!"

"Oh, you better tell me the plain truth at once. I can stand it."

"Dreams?"

"Every day. Can't quite shut off the rubbish of hopes and ambitions."

"Day be hanged! How about the night?"

"Oh, I don't know anything about the night. My system appears to have lost all interest in that."

"Then you're all right. Night is the only important part of man's existence. It's the only time when we ought to stop kicking against the Eternal. If your nights are clean and empty, the unimportant days will take care of themselves. Man is such an infatuated suicide that nature has to drug him once every twenty-four hours to keep him from destroying himself. . . . Say, old man, did it ever occur to you that man is an instrument, very nicely adjusted, but, played upon so continuously by himself that he gets jangled? When he takes his hand off at night, the Great Tuner steps in and fixes up the strings."

"You can never know," he afterward said to me, "how tired a doctor gets of his species. It isn't that he only sees the worst side of it, but, he must contemplate the infatuated determination of his race to be invalids, and the cool assumption of the race that doctors are made only to relieve it of some of the consequences of its own folly. That is what makes a man of my temperament desire to get somewhere at times where there are others than his own species."

"I should like to know," I asked, "if you include me in your species."

"Well, hardly. You're a good deal of a curiosity. The only patient I ever had who did what I told him. I was so incredulous that I had to come up here and see it with

my own eyes. You deserve to live forever."

"There wasn't much merit in it. You scared me into it."

He laughed.

"You were smart enough to rouse my will power," I said, "to a panicky point of renunciation."

"Will-power. There you go. I've heard about will-power till it makes me weary. The whole finite world has gone crazy on will-power. There is a new quackery in the market made to fit it, which prescribes will-power instead of morphine. 'Exert your God-given volition,' it cries, 'and rise above physical evils.' But, not one of its quacks can add or subtract a heart-beat by will-power, or contract an involuntary muscle. Will-power is the sovereign slave-driver of the material world. It removes mountains; but, I'll be hanged for a mountebank if it can remove remorse or set the jig for an overridden heart. Man will go on with his will-power till he has used up all the material forces of this globe, and then, if he can not get to any other, he will die of ennui. I always say to a patient of mine: 'Don't give me any of that will-power nonsense, if you please. Just take your hand off the machine for a little while, and perhaps it will regulate itself. Did it ever occur to you that there might be some will-power in the universe lying around loose that wasn't yours? If I can get a patient to stop self-focussing himself for awhile, I feel quite certain that some kind of regulative energy will drift into him. Now, then, what time do you go to your lunch?'"

Great stuff! This doctor evidently knew what the superconscious mind can do. He was sensible; he was honest; and I doubt not that, being so wise a man, he was scientific, too.

[To be continued]



Among the Books

CARREL AND DEHELLY: "INFECTED WOUNDS"

The Treatment of Infected Wounds. By A. Carrel and G. Dehelly. Translation by Herbert Child. With an introduction by Sir Anthony A. Bowlby. New York: Paul B. Hoeber. 1917. Price \$2.00.

One of the most important lessons of the war is, the effective treatment of war-wounds and, by inference, wounds received in industrial accidents or wherever there exists a possibility of infection. Against the preconceived notion prevailing almost generally before the war, that the antiseptic treatment of wounds was improper (for the reason that, theoretically, it was held to be incorrect), the early experiences in field- and base hospitals demonstrated very soon that asepsis is out of the question under war conditions and the treatment of wounds based upon theoretical considerations failed to prevent or arrest suppuration.

Under these circumstances, it was fortunate that Doctor Carrel returned to the principles laid down by Lister and that he, together with his associates, investigated and eventually perfected the Listerian teachings of antiseptic wound treatment. The volume before us contains in a practical and usable form the results of Carrel's investigations and a guide for their application in practice. The necessity for such a guide, even when we are in possession of a remarkably effective and all but ideal antiseptic substance, is vindicated by the senior author when he says:

"The mere application of an energetic antiseptic substance by any form of technic whatsoever can not be relied upon to sterilize a wound. The success of the method which enables us to render aseptic an infected wound is not due to the marvelous properties of a new drug. It should rather be attributed to a combination of means, which enables us to make use of a definite antiseptic substance under such condition of concentration and duration that its action becomes efficacious. This

method is a combination of which each single part is essential to the rest. The antiseptic can not be altered without changing the manner of using it. In the same way, a modification of the technic demands an antiseptic endowed with different chemical properties."

The book itself deals successively with the principles of the technic; the technic of the manufacture of Dakin's solution; the technic of the sterilization of wounds—mechanical, chemical, and surgical cleansing; the technic of the sterilization of wounds—chemical sterilization; clinical and bacteriological examination of the closure of wounds; the results.

This little book is chuck-full of good things and should, certainly, be studied by every medical man who does any surgical work at all.

DUMAS AND CARREL: "TECHNIC OF THE CARREL METHOD"

Technic of the Irrigation Treatment of Wounds by the Carrel Method. By J. Dumas and Anne Carrel. New York: Paul B. Hoeber. 1917. Price \$1.25.

Of the authors of this little book, Doctor Dumas is a close friend and colleague of Doctor Carrel, and Anne Carrel is the Doctor's wife. In the introduction by Doctor Keen, a warm tribute is paid Madame Carrel, who, as a helpmate, "has been so valiant an assistant in all his researches, both in this country and in France".

This little book is not intended to supplant the more complete treatise on the subject, written by Doctor Carrel and entitled "The Treatment of Infected Wounds". It deals, rather, with the work to be done outside of the operating-room. Thus, it takes up the materials used in the Carrel dressing; explains how the wound secretions are to be examined microscopically, and the significance of the findings; and how they are to be interpreted in the treatment of wounds. Several pages are given up to the dressing and the irrigating-apparatus—how they are prepared by the

nurses and attendants—while the technic of irrigation is described with some little detail. Of special interest to the pharmacist, is the chapter on the preparation of the Dakin solution. There is supplied, also, a very complete glossary and an excellent index.

Every physician who is using the irrigation treatment of wounds according to the Carrel method should, certainly, be supplied with these facts, which will be found useful in the everyday experience of his assistants.

KEEN: "WAR WOUNDS"

The Treatment of War Wounds. By W. W. Keen, M. D., LL.D. Illustrated. Philadelphia: The W. B. Saunders Company. 1917. Price, \$1.75.

This book constitutes a report compiled at the request of The National Research Council, and is a review of the experiences of numerous surgeons at the front as they were published in the medical journals of France, England and the United States or communicated to the author personally by letter. Although the author modestly declares that his knowledge is necessarily second-hand, as he has been unable to visit the hospitals in Europe, his wide experience and his keen surgical sense rather more than make up for this drawback—if it is a drawback. The author has the advantage of an interested onlooker who receives first-hand information from all sides and, therefore, is enabled all the better to draw impartial conclusions than if his activities and observations were limited to a special locality.

Doctor Keen's review of the treatment of war wounds is of tremendous interest, not only to medical men in service, but fully as much to us at home. The picture that he draws is graphic and highly instructive; and the Reviewer does not employ a mere formula but speaks with serious intent when he says emphatically that this book should be studied closely by every medical man.

The most striking feature of modern experiences in war wounds is, that, while Lister taught us how to *prevent* infection, Dakin and Carrel, following Lister's principles have taught us how to *conquer* even rampant infection. From the numerous reports at hand the author comes to the conclusion that the method of Carrel and

Dakin has shown results much superior to all others. In consequence, he enters into this particular method in considerable detail.

Doctor Keen's volume, small as it is, is so full of important information that it is difficult to review it, it can only be commended for study and this study must be urged strongly.

SOME RECENT PUBLICATIONS

The following books were received too late for review in this issue. They are, however, of immediate importance and would suitably have been considered in a special war number like the present one. The Reviewer, therefore, announces them here:

American Addresses. By Sir Berkeley Moynihan, M.S., F.R.C.S. Philadelphia: The W. B. Saunders Company. 1917. Price \$1.75.

War Nursing: A Textbook for the Auxiliary Nurse. By Minnie Goodnow, R. N. Illustrated. Philadelphia: The W. B. Saunders Company. 1918. Price \$1.50.

Principles of Surgical Nursing: A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M.D., F.A.C.S. With 255 illustrations. Philadelphia: The W. B. Saunders Company. 1918. Price \$2.50.

The Principles of Hygiene: A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A.M., M.D. Sixth Edition, Thoroughly Revised. Philadelphia: The W. B. Saunders Company. 1918. Price \$3.50.

O'BRIEN: "FOOD PREPAREDNESS"

Food Preparedness for the United States. By Charles O'Brien. Boston: Little, Brown & Co., 1917. Price 60 cents.

The author intends, in this book, to point out to the individual some of the factors involved and the lessons to be learned from the experiences of the European nations at war, particularly Germany, where food control has been most necessitous and most highly developed. It is made evident by the discussion of the author and by the data supplied by him that the United States is far from utilizing its resources for growing, harvesting, and handling food to the best possible advantage, and that many useless and wasteful methods are in vogue. Considering the fact that the problem of

food preparedness is one of the most important ones in conducting a war, this little book should be made use of widely for the purpose of informing the people of the salient facts and thereby showing them the absolute necessity of cooperating with Mr. Hoover's department in the wise use and conservation of all foodstuffs. This is an economic war-measure the urgency of which should be self-evident, and which should require no urging or persuasion, since compliance with the regulations in this respect are conducted by the laws of self-interest, to say nothing of the patriotic appeal.

PENHALLOW: "MILITARY SURGERY"

Military Surgery. By Dunlap Pearce Penhallow, S. B., M. D. With Introduction by Sir Alfred Keogh, K. C. B. Second edition. London: Henry Frowde, Oxford University Press. 1918.

This treatise on military surgery, the first edition of which was reviewed in this department less than a year ago (see June, 1917, p. 467), illustrates the rapid evolution of methods in the treatment of modern war-wounds and also the constant readjustment of ideas and theories concerning the best treatment. As the author says in his preface, theories that even a short time ago were considered sound have now, in many instances, been discarded, because superseded by more efficacious methods. The chapter on treatment has, accordingly, been entirely revised, the discussion of the methods being brought up to date so far as possible. As the book is a faithful reflection of the actual work being accomplished at the present time and as it is written by an American surgeon who has been in active war service for several years, it thereby gains interest and value for the American medical man.

"SPLINTS AND APPLIANCES"

Manual of Splints and Appliances for the Medical Department of the United States Army. New York: Oxford University Press. 1917. Price 75 cents.

This manual records the results of the deliberation of a board of medical officers directed to investigate and report upon the advisability of standardizing certain appli-

ances to be employed and issued by the medical department of the United States Army. Its findings were based upon the opinion that the splints and appliances officially adopted by the American Army should possess efficiency and correct mechanical principles, simplicity of design, low cost of construction, and transportability that is, they should be suitable for application at the fronts and should remain in place until the patient reaches the base hospital. The manual presents description of a large number of splints and other appliances suitable for injuries, not only as they occur under war conditions, but, also as they may be observed in industrial accidents. The utility of the manual, therefore, is not limited to military surgery, but, is available to the general practitioner as much as to the human surgeon.

BLAIR: "SURGERY OF MOUTH AND JAWS"

Surgery and Diseases of the Mouth and Jaws: A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures. By Vilray Papin Blair, A. M., M. D. Third edition. With 460 illustrations. St. Louis: The C. V. Mosby Company. 1917. Price \$6.00.

This volume is another one of those, revision and republication of which has become necessary through the war. In view of the many instances in which plastic surgery is called for for the restoration of function after injuries of the face and also for the purpose of securing the best possible cosmetic effects, the work before us, which really is an excellent one, is most timely. It may be said, incidentally, that the author is in charge of the subsection of plastic and oral surgery, section of surgery of the head, in the office of the Surgeon-General of the United States Army.

DEMENTIA-PRÆCOX STUDIES

For several years, Dr. Bayard Holmes, of Chicago, has sent out reprints of many articles bearing the general title of "Dementia-Præcox Studies." The study of the difficult subject of dementia præcox was forced upon Doctor Holmes, and was undertaken by him in the realization that there existed a culpable dearth of knowledge regarding this subject in psychopathic medi-

cine. Doctor Holmes organized and now is conducting a psychopathic laboratory, in which he is devoting all his efforts to the elucidation of the many problems associated with this grave malady.

The results of his own investigations and of those of others are to be made available, in future, by means of a quarterly journal called *Dementia-Præcox Studies*, the first number of which has made its appearance. The contents, as well as the list of contributors, promise well for the future of this new periodical, to which the Reviewer offers his cordial good wishes. There can be no doubt about the need of such a publication, and it is to be hoped that all physicians who are interested in the treatment of psychic disturbances will subscribe for this journal.

Dementia-Præcox Studies is published under the auspices of the Society for the Promotion of the Study of Dementia Præcox, No. 30 North Michigan Avenue, Chicago. It is to appear quarterly, the subscription price being \$5.00 a year. Single copies, \$1.25.

"MEDICAL CLINICS OF NORTH AMERICA"

The January number of *The Medical Clinics of North America* (vol. I, No. 4) is a "Boston Number" and contains clinics and contributions by many of the leading clinicians of that city. While all articles that fill the 200 pages of text are interesting, our attention is attracted by that of Dr. Henry A. Christian on heartblock, the one by Dr. Elliott P. Joslin on severe diabetes, further, Dr. John Lovett Morse speaks on empyema in children, Dr. W. P. Graves on ovarian organotherapy, and Dr. Charles J. White on premature loss of hair. In addition to these, there are many other valuable contributions.

The Medical Clinics of North America is published bimonthly by The W. B. Saunders Company, at a subscription price of \$10.00 per year.

"PROGRESSIVE MEDICINE"

The March number of *Progressive Medicine* contains reviews of the literature on surgery of head, neck, and breast, also of the thorax; then a number on infectious diseases including acute rheumatism,

croupous pneumonia, and influenza. In this part, much attention is devoted to the consideration of infantile paralysis (poliomyelitis). Further discussions refer to diseases of children, also to diseases of nose, throat, and ears.

Progressive Medicine is a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by H. A. Hare, and is one of the standard publications that enable the physician to keep up with the progress recorded in medical literature. It is published by Lea & Febiger, Philadelphia and New York, at \$6.00 a year.

"INTERNATIONAL CLINICS"

The first volume of the 1918 series of *International Clinics* contains clinical lectures on various topics. In addition, there are monographic articles on joint affections, on hernia of the lung, on pathologic conditions of the nails; lastly, attention is given to the treatment of shell- and gunshot-wounds and to the sterilization of infected wounds with dichloramine-T. These are only some of the topics discussed in the volume.

International Clinics is a quarterly of illustrated clinical lectures and especially prepared original articles. It is edited by H. R. M. Landis, with the collaboration of many leading physicians and surgeons. The publishers are The J. B. Lippincott Company, of Philadelphia, and the price per volume is \$2.50.

PORTER: "HYGIENE AND PUBLIC HEALTH"

Elements of Hygiene and Public Health: A Textbook for Students and Practitioners of Medicine. By Charles Porter, M. D. With 98 illustrations. London: Henry Frowde, Oxford University Press. 1917. Price, \$4.15.

This treatise was written deliberately for the purpose of supplying the needs of the medical practitioner in relation to questions of public health and disease prevention. Accordingly, it is less technical and less cumbersome than the customary textbooks on the same subject, and, possibly, for this very reason, of greater service to the general practitioner who desires the necessary information presented to him in a concise and brief form.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6374.—“Rigidity of the Sternomastoid Muscle in an Infant. Persistent Vomiting.” C. P. F., Idaho, asks: “What is the cause and best treatment for rigidity and swelling of the left side of the neck in a 5-weeks old nursling? It seems confined to the left sternomastoid muscle and contiguous structures near the mastoid process and the angle of the jaw, causing pain and impaired motility. Only once before did I encounter such condition, this then being bilateral and the rigidity almost bone-like.

I should like to be advised, also, in the next case, that of almost continuous vomiting of each feeding; during the day only, in a 3-months old nursling, a boy, who retains, however, the evening and night nursings, rests in comfort all night, but, begins his struggles anew with his morning's supply. The attacks, lasting fifteen to thirty minutes in all, begin with whining, signs of gastric irritation, which increase to pain, loud crying, violent squirming, and terminate in repeated vomiting of partly curdled milk.”

We are inclined to believe that the rigidity and swelling of the left side of the neck in the 5-weeks old nursling (case 1) is due to some trauma incurred during delivery. It would seem, from the brief description you give, that there is no glandular involvement, therefore, we should content ourselves with the application of some very mild iodine unguent.

As for case 2, you can readily understand that the nursling who begins to vomit after the first morning feeding must be very carefully studied, in order to arrive at a definite diagnosis.

In the first place, it is possible that the child receives the night nursing in the recumbent position, while the morning and

day nursings may be given in the ordinary position across the mother's breast.

Again, there is a possibility that the mother's milk differs materially after a night's rest and we should, therefore, suggest that it be examined. The child may suffer from hyperacidity and it might be an excellent idea to give a small quantity of milk of magnesia before the morning nursing. This suggestion is based upon your statement that the child repeatedly vomits partly curdled milk. Another excellent plan in these cases is, to give a few dropperfuls of warm thin barley-water before the child is put to the breast. Also, the mother should draw off an ounce or so of milk with a breast-pump before nursing.

If you will give us a clearer idea of the general conditions, age and health of the mother, and character of the baby's stools, and send, at the same time, specimen of the mother's milk (or, better still, two specimens, one taken at night and the other the first thing in the morning) to a good pathologist for a report, we may be in a position to serve you more intelligently.

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QUERY 6375.—“General Anasarca: Leukemia?” L. L. F., Missouri, describes the case of a girl, eight years old, whom he has been treating for several months, but apparently without any beneficial results. The patient “is swollen from head to feet; that is to say, she has a dropsical condition of her entire body, but, there never has been much water in the abdominal cavity. Some fluid passes when there is an action of her bowels. The bowels move regularly and the kidneys appear to be acting freely. Digestion apparently is very good. The disposition is generally cheerful.”

A diagnosis of leukemia has been made, but, our correspondent by no means is

positive as to the causative factor. "There is considerable anemia. Two of the girl's aunts died of white-swelling and the father had a dropsical leg, when a boy, terminating in a running sore."

As you are aware, leukemia is a comparatively rare disease in childhood and is more frequent in males. In a small number of cases, heredity must be considered as an etiologic factor. The disease may follow syphilis, rickets, malaria or even simple anemia.

Naturally, enlargement of the spleen should be detectable or, if the lymphatic form of the disease exists, any of the most external glands may be affected.

In order to arrive at a diagnosis, a very careful examination of the patient must be made, and it would be necessary to have a much clearer idea of earlier conditions. The blood and urine must, of course, be examined.

The child does not seem to have had any hemorrhages, neither do you mention dyspnea or the presence of a weak, rapid pulse. Late symptoms, of course, are either dropsy of the extremities or general anasarca, hemorrhages, diarrhea, headaches, weakness, attacks of fainting; fever is quite constant in the late stages; sometimes the temperature will range up to 101° to 103° F.; the urine, as a rule, contains albumin and casts.

In simple anemia, we hardly should expect such marked general anasarca; still, as we already have pointed out, in order to arrive at a positive diagnosis, a blood count is essential. True leukemia, unfortunately, is very little influenced by treatment, though arsenic in rather large doses, with iron and codliver-oil, must be regarded as useful remedies.

We should be inclined, also, in this case, to try apocynin, with perhaps the addition of scillitin in small doses.

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 QUERY 6376.—"Alas! To What Disorders is the Human Frame a Prey." W. T. K., Illinois, has been called to attend a man, seventy-four years old, who "has been afflicted with rheumatism since last September and been treated by many doctors. He has had three specialists recently, the last one seeing him in the first week of the present month. I was given permission to read the final report and findings:

"(1). Cataract, more decided in left eye; (2) pyorrhea of the gums, many teeth in-

fectured; (3) labyrinthine disease in the left ear, producing vertigo and ringing in the ears; (4) general arteriosclerosis, with arteriosclerotic changes in the vessels of the heart; (5) emphysema of the lungs; (6) enlarged prostate gland; (7) osteoarthritis of left hip, sacroiliac joint and spine, hypertrophic type. Laboratory findings: (1) Urine, single specimen: Color, light-straw; specific gravity, 1010; reaction, acid; dextrose negative; faint trace of albumin; occasional pus-cell; casts and erythrocytes negative. (2) Blood: Leukocytes 13600; erythrocytes, 4,350,000; stained smear normal. Wasserman negative.

"Another man, from St. Louis, diagnoses cancer of the rectum. Still another claims that the enlargement of the prostate gland is that which comes with old age. "I told his wife that I could subscribe to but very little of this. I found him in a chair, complaining of pain in shoulder and hip. He can not walk; says, the limb would give 'way with him at the hip.' He has never had to work, and (I think) dissipated in his younger days. Temperature and respiration normal, pulse 120 and weak. Sleeps well, except to awaken at times, to void urine. Is constipated, has foul breath and a foul, dirty tongue, bowel passages are rank. Has enlarged prostate gland. Has a weak stomach; very seldom vomits, but, complains of sick feeling and desire to vomit.

"I have started elimination and it has done much good; his breath is sweeter and tongue clearing; he looks brighter, feels better, and pulse and heart-action are decidedly better—pulse 88."

We hesitate somewhat to prescribe for this 74-year-old man, especially if he has the terrific category of diseases discovered by the St. Louis specialists.

True, in a man of seventy-four, we might expect to find cataract and could even congratulate the patient that only one eye is involved. Neither should we be surprised to find more or less pyorrhea; though, again, we could congratulate the patient that he had any teeth left to be infected. But, when it comes to labyrinthine disease, emphysema of the lungs, osteoarthritis, to say nothing of general arteriosclerosis and sclerosis of the vessels of the heart, we are, certainly, compelled to wonder whether euthanasia would not be justified!

Seriously, though, the condition of your aged patient seems to be a grave one and

if he has, as the other St. Louis man claims, cancer of the rectum, in addition to the other maladies, we fear you will be compelled to render a most guarded prognosis.

However, considering the fact that his temperature and respiration are normal and that he sleeps well, we are inclined to take a somewhat cheerful and common sense view of the situation, and believe that, if you continue to eliminate thoroughly, a very marked improvement in the patient's condition will follow—though, of course, we can not expect the enlarged prostate gland to contract or the cataract to disappear under any medication whatever.

Were we in charge of this man, we should ignore the specialist's diagnosis and give rather frequent high enemata of physiologic salt solution; massage the prostate gland; each night insert a simple sedative suppository; place him upon a semifluid diet; besides give papain, diastase, pepsin, with a little charcoal, after each meal. At least three times daily, we should give him cactin and brucine. Once a week, give a few divided doses of calomel and podophyllin.

If the skin is kept active and the old gentleman is cheered up, he may remain with you, for, lo these many months or even years.

QUERY 6377.—“Salvation of Pregnancy.” M. C. B., South Dakota, asks what can be done to control “extreme salivation in a primipara, aged twenty-two, probably three months pregnant. The patient has uterine trouble which needs treatment, but, as she lives out in country, 200 miles away, she has to wait for that for about two months.”

This condition is closely related to hyperemesis in that it is caused, probably, reflexly; in fact, salivation is nearly always combined with more or less nausea or even vomiting, beginning, as a rule, in the second month of pregnancy and ceasing in the fifth or at the period of quickening. It is a fact that ptyalism occurs most often in neurotic women though it may be a familial characteristic.

The treatment to pursue is along the same lines as in hyperemesis. Probably 10 to 15 grains of sodium bromide three times daily best meets the requirements. Atropine or hyoscyamine rarely proves satisfac-

tory, and if given to full effect even are dangerous.

Do not forget that occasionally in so-called “cotton-spitting” cases gingivitis is present: there is loosening of the teeth, some hemorrhage from the gums, and more or less salivation. Always in such cases antiseptic mouth-washes (usually mildly alkaline in character) are indicated. The patient should receive iron and calcium tonics.

If you will give us a clearer idea of the symptoms present in the particular case under observation, we shall be able to serve you more intelligently.

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QUERY 6378.—“Treatment of Pertussis.” J. A. C., Mississippi, is “in the midst of an epidemic of pertussis, is not at all pleased with the action of his remedies, and would welcome suggestions both as to treatment and prophylaxis.”

We strongly suggest that you employ the pertussis-combined-bacterin, each mil of which contains 100,000,000 bacillus pertussis, 50,000,000 pneumococci, 50,000,000 streptococci, 100,000,000 each of staphylococci albus and staphylococci aureus, and 100,000,000 micrococcus catarrhalis.

At the same time, bear in mind that pertussis presents three distinct stages: catarrhal, spasmodic, and retrogressive. If correctly treated in the early stages, the disease can, usually, readily be controlled.

It must be remembered, however, that children suffering from rhinitis or some chronic disease of the upper respiratory tract prove bad patients.

The catarrhal stage, during which there is coryza, slight fever, and a dry, irritating cough, ordinarily lasts from ten to fourteen days, although some children “whoop” sooner. Others hardly do so at all. Violent sneezing, vomiting or attacks of faintness may either replace the “whoop” or precede it.

In the catarrhal stage, the present writer finds three remedies sufficient, these being atropine or hyoscyamine (preferably the former), calcium sulphide, and calx iodata. It would be an excellent idea to initiate treatment with several small doses of calomel and podophyllin, followed by a laxative saline. Then, every hour while the child is awake, for two days at least, give 1-6 to 1-3 grain of calcium sulphide and every three hours give 1-3 to

1 grain of calx iodata. Also dissolve ten granules of atropine valerate in 24 teaspoonfuls of water and give of this thirty or forty drops four or five times a day. The pertussis bacterin may be used at this period or later.

When the spasmodic stage is established, this medication is not so effective. Here, rather full doses of lobeloid or stillingoid should be given, together with some such sedative as monobromated camphor, alternated with small doses of atropine, until the face becomes flushed.

Furthermore, nearly all these young patients are benefited by quinine arsenate given after meals.

The nostrils and nasopharynx should be cleansed thoroughly with some mild alkaline antiseptic, and then sprayed with camphomenthol or similar oleaginous preparation. Today, we should feel very much inclined to try dichloramine-T.

In the most severe spasmodic forms, the following may be given: hyoscine hydrobromide, gr. 1-1000; morphine hydrobromide, gr. 1-64; cactoid, gr. 1-128; pilocarpine hydrochloride, gr. 1-128; caffeine, gr. 1-64. This dosage to a child five years or over; the dose to be repeated in three or four hours.

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 QUERY 6379.—“Typhopneumnia?” F. A. V., California, seeks information as to the probable character of a peculiar fever which caused the death of a 17-year-old girl—a high-school student—who always had been healthy, strong and normal. “The first symptom occurred when one morning she did not have any appetite and ‘felt sick.’ Upon returning home from the afternoon studies, she was too tired and faint to walk upstairs. Soon afterward, she went to bed, where she remained for three weeks under the care of four doctors and two nurses. Soon a high fever came on, together with delirium and unconsciousness, the latter lasting about one week. However, at different intervals, the patient would become conscious for a brief space of time. Typhoid fever was feared, but, unsimilarities proved the contrary. On the

nineteenth day, pneumonia set in, causing the girl's death. During the last ten hours of her life, her breathing was at the rate of about 70 per minute and the temperature was 107-2° F.

At the necropsy, 7½ inches of the intestine was found to be affected, but, every other part of her anatomy proved perfectly sound and normal. The intestine showed small ulcers less than one-half the size of those found in typhoid fever. Such a case has never been heard of before, here. Can you give some light upon this remarkable malady?”

Unfortunately, you do not state what portion of the intestine was found ulcerated. We also are at a loss to reconcile your statement, “every other part of her anatomy proved perfectly sound,” with the prior statement that “on the nineteenth day [of her illness] pneumonia set in.” Despite minor clinical inconsistencies, we would, certainly, be inclined to consider this a case of enteric fever, complicated with pneumonia, or, possibly, with so-called “typhoid-pneumonia.”

Are we to assume that Widal and diazo tests proved negative, or were such tests not made? How long did the girl live after pneumonia symptoms were recognized, that is, after the nineteenth day? You merely state that at that time pneumonia set in, and during the last ten hours of her life the respiratory rate was seventy per minute, and the temperature 107 degrees. Such a temperature, though, is not exceptionally rare, while a respiratory rate of 70 has been observed in pneumonia more or less frequently.

Did the girl complain of headache at the first attack? Any other cases of typhoid fever in the vicinity or evidence of her exposure to infection? Had there been any eruption at any time? What was the character of the stools? What was the shape of the ulcers? Were they superficial? What was the tentative diagnosis prior to the appearance of terminal pneumonia? If you will favor us with fuller clinical data, we shall be in a better position to discuss the case with intelligence.



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The Power of Imagination

A DETAIL-MAN of my acquaintance recently called on a physician and asked him about his experience with a certain modern preparation that had been elaborated for, and found highly useful in, the treatment of septic wounds. The doctor declared that he had had no septic wounds to treat since receiving the sample and, therefore, could not express an opinion.

On visiting another physician, in an adjoining office, the detail-man was received most cordially, and the doctor launched into an animated relation of his splendid experiences with this same drug. Septic wounds? No, not any; but, there was a case of persistent leucorrhœa that had cleared up beautifully. Then, used as a spray, the solution had reduced an angry pharyngeal catarrh in one case and aided greatly in relieving rhinitis in another. In short, this physician had found a great many different uses for this antiseptic and was full of praise for it. This doctor, be it said, incidentally, was far more successful than the former one. He used his imagination and set it to work, while the other did not, just taking things literally,

limited by the printed letter without entering into the spirit of the thing. Not able or too indolent to give his imagination scope—since he had none—he was not over successful in his calling.

Henry Ward Beecher once declared that imagination is the secret and harrow of civilization, and, in the opinion of the first Napoleon, imagination rules the world. Beecher also said that the soul without imagination is what an observatory would be without a telescope.

Most certainly, imagination is the ferment that gives stimulus to new discoveries and to progress. Without imagination, the Pharaohs could not have erected their pyramids nor could the Egyptian hieroglyphics, nor, for that matter, the Assyrian cuneiform inscriptions, have been deciphered without it. If it had not been for a vivid, well-directed imagination, Hippocrates never could have left us those masterly descriptions in clinical medicine that arouse our admiration and deserve our appreciation to this day. Without imagination, Harvey never would have discovered the circulation of the blood nor would

Jenner have opened up the possibilities of the prevention of infectious diseases. Without imagination, Pasteur could not have accomplished his wonderful work in bacteriology; Koch could not have discovered the bacillus of tuberculosis. In short, all the fascinating discoveries and acquirements of bacteriology, immunology, and modern prevention would have been impossible.

It was imagination that aided Metchnikoff in evolving his ingenious theory of phagocytosis, which has opened up our understanding, not only for the processes of immunity and immunization, but, for so many other physiological happenings. And, to come down to the most recent times, it was the well-directed exercise of imagination, and a result of it, that made possible the remarkable work of Carrel and Dakin, through whose efforts so many wounded soldiers now are promptly being restored to health and renewed functioning power.

It hardly is conceivable how any progress whatever can be possible without the aid of the imagination. Imagination guided Bell in the discovery of the telephone, and Edison in his remarkable methods of employing and utilizing the electric force; it was responsible for the Brooklyn bridge, one of the wonders of its day, and for all notable accomplishments of engineers, architects and discoverers in every field.

So, it is not possible for a physician to practice his profession successfully without exercising imagination. As Dr. Hobart Amory Hare truly says, for the man with a dormant imagination or for the man who possesses no imagination, the practice of medicine or any other pursuit is an uphill road. Such a one leads a leaden existence, in narrow alleys in which the sunlight rarely falls. On the other hand, he who is endowed with a well-developed and well-controlled imagination walks in wide avenues filled with sunshine and fresh air. Imagination has made the pioneer physician, as also the American country doctor what he is. It has enabled a doctor in charge of a child sick with diphtheria to save his patient, while an unimaginative attendant would have let him die; the difference being that when, say, tracheotomy was urgently called for, but, suitable instruments were not to hand, the former nevertheless opened up the trachea and kept open the incision by means of a

retractor fashioned out of a hairpin. Imagination has enabled many a country doctor to do many things in emergencies that would arouse the astonished admiration of their city colleagues. Imagination makes it possible for the true physician to lead a large, useful life, while his competitor, when devoid of it, grubs along in a rut.

I am quite sure that there have been few men that have done great things in the world who have not had a large power of imagination. For, if this gift be well controlled and subjected to reason, it is the "slave of the lamp." The late Doctor Trudeau declared that "in the innermost recesses of their ego, few physicians are entirely free from some degree of imagination and faith which they habitually quench and which, if cultivated, would at least broaden the sphere of their activities and make life less colorless."

If imagination, well controlled and conscientiously directed, has been responsible for the world's progress in sciences, arts, and the useful industries, it must not, though, be forgotten that imagination run astray or badly controlled is a potent source of evil. Such ill-directed imagination is responsible, for example, for what newspapers are pleased to refer to as the Russian fiasco. It accounts for the failure of Kerenski, of the Bolshevik government, and of all the misguided Russian patriots who are attempting to put their utopian dreams—ill-conceived in themselves—into practice.

It may be said that well-directed imagination is a necessary condition for fair dealing to ourselves and to our fellow men and that a badly directed imagination is responsible for many of the human ills and human unhappiness and misunderstandings. Imagination is the secret of fair play, for, it means, to put oneself in the other fellow's place, judging him from his own standpoint and understanding his motives; in the words of the French proverb, to understand all, is, to forgive all.

It is owing to a faulty or misdirected imagination that we commit the mistake of judging others by our own limited personal standards; for this reason inevitably misjudging them. Worry, also, is possible only because of a straying, riotous imagination. The man who is happy only when he can make himself miserable worry-

ing about some supposititious possibility permits his imagination to run into evil ways and injures, not merely himself, but those who are compelled to live with him. In many patients, worry renders all the most faithful work of the physician illusory, because it destroys all the good that well-directed treatment otherwise would accomplish. Brooding and fretting over what might, or would be if things were different, never accomplished any good.

Physicians without imagination are prone to turn off the complaints of their patients with the contemptuous remark: "It's only your imagination," forgetting entirely that the man or woman who thinks that he or she is sick, actually is sick; forgetting also that, as a great French physician once said, imaginary diseases are not imagined diseases. Here, again, it is only the physician endowed with a well-developed and well-directed imagination who can enter into the psyche and into the mentality of his patients or is able to treat them successfully. It may be (and I am not at all sure that it is so) that in animals illness is purely a physical matter; yet, I read only recently that Charlie Chaplin's dog, which was left behind while the noted film-actor was touring the country in behalf of the third liberty loan, grieved so greatly about its absent master that it died. However, while in animals the physical probably overshadows the mental, in human patients, the disease-condition never is represented solely by physical abnormal functionings; but, it always is influenced very greatly by the mental attitude, the mental processes, and by the psyche of the patient. It is for this reason that an optimistic physician, with his well-controlled and well-directed power of imagination, will benefit so many neurasthenic and other patients, whose condition had been aggravated under the care of a former pessimistic medical attendant whose perverted imagination had caused the patient to become despondent, thereby preventing recovery.

Not only is imagination, if badly controlled, responsible for social and other ills, for anarchism and revolutions, for obstructive pacifism as well as blatant militarism, for extreme poverty as well as for excessive riches, but, it is responsible, also, for the unfavorable outcome of so many ailments that otherwise might terminate in recovery if directed and guided by a physician whose imagination is controlled by an

optimistic attitude of mind, by a hopeful, well-balanced outlook upon life.

Thus, then, let us develop our imagination in the right direction; let us take care to control it rightly, remembering that the benefits accrue, not only to ourselves personally, in increased contentment and happiness, but, that our ability to do good will be increased thereby manifold.

In the history of man it has been very generally the case that when evils have grown insufferable they have touched the point of cure. —Chapin.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION

On June 10 to 14, the American Medical Association will hold its annual session in Chicago, and we hope, on that occasion, to greet many of our friends in the beautiful city on the great lakes. We have often said that our latchstring is always out. For the period of the session, we shall discard even the latchstring and throw the doors wide open, hoping that you may find time, doctor, to run out to Ravenswood. Take a Ravenswood elevated train, on the Loop, get off at Ravenswood station, then walk one block east and two blocks north. You can't miss the two big buildings on the corner of Lawrence Avenue.

THE BUSINESS END OF IT

A salesman, whose work brings him into constant contact with physicians, wrote as follows in a recent letter to his manager:

"In general, I believe that the condition in any territory is just what the salesman makes it. If he is slack, his customers will be slack; on the other hand, if he gets them into the habit of paying, they think that it is the only way you do business, and as long as they buy goods from you they will continue to pay as you taught them. The same thing that is true of prices is true of collections. Get the reputation of being a price-cutter, and everybody wants you to cut the price; and, you get the reputation of being slack on collections, and your customers will be slack, as well.

"What is true of collections is true of doctors taking discounts; get them into the habit of taking advantage of our liberal discounts for cash, and the doctor who is the best pay will give you the money, and the reward the salesman gets for his effort in getting the money promptly is, that,

when making a call next time he knows that the doctor owes him nothing."

Is there anything for us to add? While this quotation refers to dealings between salesmen and physicians, the application to relations between physicians and their clients is obvious. The business side of the medical calling is neglected too much by those men who are most in need of financial returns for their work. As a class, we are absurdly lenient with our patients and are prone to accept any settlement that they choose to make. Accustom your patients to pay their bills promptly and they will stick far better than if they are permitted to owe you for long periods.

Experience is a safe light to walk by, and he is not a rash man who expects to succeed in future from the same means which have secured it in times past.
—Wendell Phillips.

THE DANGERS OF MENTAL STRAIN

Intellectual work does not injure health or shorten life, but, mental overwork, when associated with emotional strain, often is a cause of nervous breakdown and disease.

Health and life are sometimes lost through forgetfulness of the fact that mental strain is dangerous to those in or past middle life who attempt brainwork to which they have not been accustomed.

If not subjected to excessive mental or physical strain, public and professional men, although afflicted with organic diseases, may live in comfort and do a moderate amount of work for many years.

Among physicians, lawyers, and journalists, the performance of brainwork under pressure for long periods and under bad conditions is a common cause of ill health.

Comparatively few clergymen succumb completely under mental overwork, although many of them suffer from a mild, annoying form of nervous exhaustion.

The danger to the scientific worker usually arises from too intense and prolonged activity of the mind in one direction. It springs largely from the fascination it has for its votaries.

Chronic nervous exhaustion is not common among men prominent in public affairs and in the professions. Such men, however, are sometimes the victims of a severe acute nervous prostration.

The warnings of mental overwork and overstrain vary, but, certain psychical symptoms are laxity or immobility of

countenance, diminished resisting power; heart weakness, sleeplessness, cervico-occipital pain or distress and "dyspepsia" are of most frequent occurrence.

Insanity in some form is occasionally developed by overstrain of the nervous system.

Tuberculosis, diabetes, nephritis are among the diseases most likely to be aggravated by mental overwork. Men in whose families phthisis is hereditary should carefully guard against such overwork.

Overtaxing the mind and nervous system may be the exciting cause of almost any serious disorder to which chance, accident, imprudence or infection exposes the individual.

THE AMERICAN SOLDIER.

Europe seems to be on the verge of making a momentous discovery—the American. This fighting Yankee of ours is a distinct type, and it will be very difficult, indeed, for us, whom age or physical infirmity keep out of it, to avoid becoming very proud of him. We read of the American officer who, while on a raid in the German trenches, came upon a German officer. The American instantly covered him with the butt of his trusty riding-whip, compelling the German to surrender, then disarmed him and marched him to the rear, a prisoner. Then there was General Carey. True, he is not an American, but, surely, he ought to be. In their most recent advance, the Germans irrupted between the British and French armies. Carey hastily gathered together some two thousand nondescripts—engineers, stragglers, teamsters, even a bunch of Chinese laborers—armed them with any weapons that could be picked up, from rifles and machine-guns, to crowbars and pick-axes, and with this motley array, some relying even on their fists, held back the perfectly trained legions of Germany for two whole days, until the French could assemble their forces sufficient to stop the gap and hold the line. More power to Carey! We should like to honor ourselves by shaking hands with him. There is credit, surely, to a man who can succeed with a well-appointed military force, but, what is that to such a deed as this of Carey's?

One characteristic of the American soldier that seems to surprise his European enemies is his good nature. The amazed

Germans remark that the American comes into battle laughing. Just so, the Spaniards at San Diego told that the American soldiers when charging, instead of trying to bayonet their enemies, endeavored to capture them with their hands!

The American does not have to be aroused to the requisite fighting-point by a course of bloodthirsty murder, rape, and destructiveness. He goes into battle for the love of the scrap. Moreover, the men who have fought through a football-match and after it was over sat down to a fraternal dinner with their whilom antagonists are not likely to feel very venomous toward men they are meeting in real battle. However, the unsportsmanlike conduct of the Germans is, they say, gradually engendering a personal hatred and contempt that may change all this in time.

But, after all, who is this American soldier, of whom we are talking? Here is the platoon turned out for the inspection of a group of French officers. The roll-call gives the names: Perkins, Grant, McGregor, Powell, O'Rourke, Skoglund, Anderson, Dombrowski, Orlof, Georgevitch, Scopek, Berteau, Apostolides, Paccella, Hovnanian, Gonzales, Pereira, and, yes, not to forget Wah Lee. The inspecting officer walks along the line with a perplexed expression until he comes to Berteau. The officer stops and says:

"You at least are French."

"No, my general, I am American."

"But, your name is French."

"Yes, my general, I was born in France and my parents still live in Loiret. But, I have been in America a number of years."

"Does that make you less a Frenchman?"

"No, my general, but, it makes me something more. You see, it's like this: because I am so intensely proud of my French nationality, I do my very best, that not one of this bunch shall excel me; and I think every one of them feels and acts the same way."

A growl of assent comes from the whole line. He proceeds:

"Besides that, every last one of them has something he can teach the rest, so that each one of us learns from all the others something that is of advantage to us and makes us better Americans."

"Yes," rejoins the general, "but, these people have been living for hundreds of years side by side in Europe, and no such

amalgamation has taken place. How do you account for this?"

The soldier considers: "I can hardly reply to that, my general, but, I know this, that the day an immigrant lands in America, he is universally recognized as a new-comer and 'greenhorn'. The first thing we do is, to take him to get a shave and a hair cut. Then a suit of regular clothes, just like other people wear; and pretty soon we find him striving with all his might to be like the other Americans. It depends upon the man, of course, but, it isn't very long until you can't distinguish him from the rest. The place of his birth, of which he is not, by any means, ashamed, becomes a tradition to him. He doesn't accentuate it, but, tries earnestly to throw off the peculiarities that he brought with him."

And so it goes that these men, gathered from all parts of the habitable globe, are soon animated by the same spirit and are alike in their love for the land of equal opportunities, the country of a fair field, and no favorite.

The great blessings of mankind are within us, and within our reach, but we shut our eyes, and, like people in the dark, we fall foul upon the very thing we search for, without finding it. —Seneca.

DICHLORAMINE-T FOR WOUNDS AND BURNS.

After nearly three years of war, the majority of surgeons appear to be agreed upon two cardinal principles for the prevention and control of infection in wounds. In an unusually interesting paper contributed to *International Clinics* (1918, Vol. 1), Dr. W. Estell Lee declares the first of these factors to be the interval of time elapsed between the injury and the proper surgical treatment. The incidence and virulence of infection in gunshot wounds definitely increases with delayed surgical treatment; and, it is to be noted that this has been found certainly to be true for traumatic wounds in civil life. The second equally important factor is, the character of the primary treatment, it being essential that every effort be directed toward obtaining the earliest possible closure of wounds.

Doctor Lee insists, as we have pointed out repeatedly in these pages, that these surgical principles dictated by war experience can, and should, be applied in civil-life surgery. Indeed, their application, it is found, certainly has decreased to a large

extent the labor and time usually required to obtain healing of infected wounds. This becomes very clear when it is considered that, when the primary treatment was received within the first half hour after the injury, the average healing-time was six and one-half days, while, when this treatment was delayed (the average interval being six days), the period required for healing was twenty-eight and six-tenths days.

In substantiation of his conclusions, Doctor Lee discusses his experiences in a series of 27 cases of carbuncles, in which the method used and the results obtained are typical of the changes wrought by the newer surgical measures.

With the patient under a general anesthetic, deep crucial incisions are made through the carbuncle, down to the deep fascia. Arterial bleeding is arrested by means of ligatures, and from one to four gauze tampons saturated with a 5-percent solution of dichloramine-T in chlorinated paraffin-wax are firmly packed into the incisions, one in each limb of the star-shaped wound in the large carbuncle. Over this, is placed a light gauze dressing, which is changed when soiled.

In this manner, a large mass of germicide is brought in contact with the surface of infection. At the same time, the wounds are widely opened, to assure the necessary access of the germicide to the infection at subsequent dressings. The tampons are permitted to remain twenty-four hours, while in very large carbuncles repacking may be advisable. In areas under one square inch, the slough frequently separates during the first twenty-four hours. In larger areas, it has taken ten days.

At each daily dressing, the 5-percent solution of dichloramine-T is injected into every accessible channel by means of the glass pipette and syringe. As soon as the slough has entirely separated, daily bacterial counts are made, and when these have remained as low as one in five fields for three successive days, closure of the incision may be attempted. This closure is not difficult up to the twelfth day, while later approximation of the wound edges requires more or less tension, owing to the rapidly forming cicatricial tissue. This tension is a cause of reinfection and, hence, should be avoided whenever possible.

In the second part of his paper, Doctor Lee discusses the ideal dressing of burns,

which has long been an *ignis fatuus*, for the reason that all methods available had their serious drawbacks, which interfered with ideal healing of the burns. In his most recent experience, he found that by exposure to the air, the latest mode of treatment may be greatly improved by adding an antiseptic to a single layer of mosquito-netting, which is made to cover the entire burned area and a generous portion of the surrounding skin, after having been previously impregnated with paraffin-wax.

Numerous experiments have shown that a pure paraffin, as well as the various modifications of the original French ambline that are on the market, among them parresine, are not affected by prolonged soaking in dichloramine-T. It was found that a 1- or 2-percent solution of dichloramine-T dissolved in chlorinated paraffin-wax, after the method proposed by Dakin and Dunham, can be applied to burned surfaces without causing any objectionable subjective or objective irritative phenomena. This oily solution can be readily applied, in the form of a spray, to the entire burned surface before the paraffin-net dressing is laid on, and subsequently, through the meshes of the net onto the surface of the wound, if it is unnecessary to remove the dressing.

This modified air treatment of severe burns of the third degree has been employed in 55 cases, and because of the surprisingly small degree of infection occurring in these wounds they healed more promptly and with a more satisfactory scar than under any other method that the author heretofore had employed.

Hobbies should be wives, not mistresses. It will not do to have more than one at a time. One hobby leads you out of extravagance; a team of hobbies you cannot drive till you are rich enough to find corn for them all. Few men are rich enough for that.

—Bulwer-Lytton.

CANCER

A good deal has been said of late, in these pages, about cancer. But, really, what is there as well worthy of our consideration? This insidious malady is markedly on the increase. There are few, if any, of us but have grown serious over its inroads among not only our patrons, but—coming home more closely—among those who are near and dear to us. The conviction grows upon one, the more he studies this disease, that

there is scarcely anything so deserving the attention of the medical profession.

We have before us the "Campaign Notes of the American Society for the Control of Cancer," Vol. I, No. 1, dated January 15, 1918. This is a bulletin intended to be issued monthly for the information of everybody who can be reached. It tells of efforts to interest various associations, medical and otherwise, in this work. It is a most commendable movement. Those who have not received copies of the "Campaign Notes" should get in touch by applying to the national headquarters of the society, 25 West 45th Street, New York City.

Meanwhile, a promising lead seems to have been opened up by a Chicago doctor, Bertha Van Hoosen (*Woman's Med. Journ.*, Jan.). She seeks to fix the etiologic factor of carcinoma among the protozoa, and in this connection touches upon the known existence of "cancer-houses". After pointing out that during the two preceding years every carcinomatous patient coming to the clinic of the Cook County Hospital has been found to suffer from pyorrhea, she suggests that this, rather than the use of hot liquids, as inferred by Doctor Mayo, may account for the common location of cancer in the stomach, especially so in the case of men, who neglect their teeth far more than do women.

Beginning, therefore, with the ameba as an assumed cause, Doctor Van Hoosen has treated her cancer-patients with emetine. These are divided into three groups, comprising, first, those treated with emetine alone; second, those thus treated after operation; and, third, those beginning with emetine, undergoing operation, and again receiving emetine. Naturally, the third group seems to be the most promising.

Beginning with the ordinary doses of emetine, 1-2 grain hypodermically daily, Doctor Van Hoosen eventually arrived at the conclusion that from 4 to 8 grains, in 2-grain doses, daily must be taken. She asserts that 8 grains, of the alkaloid, given 2 grains every two hours, produces no dangerous or even uncomfortable symptoms in carcinomatous patients. The result is, a hardening of the fatty tissues, apparently due to fibrosis induced by the selective action of the emetine on carcinomatous tissue. In her list of 12 patients, are included 3 of sarcoma, in all of which the benefits corre-

spond with those in carcinoma. A quotation from one case will illustrate the results Doctor Van Hoosen has been getting. "Adenocarcinoma filling the vagina, pronounced inoperable. Eighteen grains of emetine was injected during nine days. The hardening of the carcinomatous tissue made such a line of demarcation between the normal and diseased tissue that hysterectomy was undertaken and successfully performed. Three weeks after this operation, emetine was again given for three days—2-grain doses daily. The patient is well and shows no signs of return or ill health."

This lead seems too promising to be neglected. Unfortunately, the tendency of our profession is, to cut short any new method, rather than to conduct exhaustive investigations; and it seems more likely that the efforts of the profession, as a body, will be frittered away over a score of experimental methods, instead of being concentrated upon a single one that seems promising. Here is where a very objectionable personal element comes into play. For, if twenty distinguished surgeons are making such an investigation, each of the score would like to be the one to be honored as the original suggestor of the successful method, whereas there is small honor in helping to establish another man's theory.

Life is full of golden opportunities for doing what we do not want to do.

SELFISH INVALIDS

From the cradle to the grave, our life is, or should be, one series of struggles against self! The whole secret of a noble life is self-surrender, and, hard as is the prolonged battle against our selfish inclinations at all times, it is "when pain and anguish wring the brow" that the mocking friends of gloom and irritability and discontentment draw nearest. Then they come and sit beside our pillow, murmuring suggestions of evil. Then it is that our miserable "ego," with its aches and its pains and its restlessness, is prone to overwhelm the divine spark within us.

Now, every allowance should be made for the selfishness of the sick, and the nurse-professional or amateur must exercise great patience and gentleness with the sufferer in charge, bearing cheerfully and good-temperedly with the varying moods,

the depression, the irritability of the patient. But, then, this is not always an easy matter.

The invalid, too, has a duty, which is, to be considerate to his or her attendant. Granted that the nurse has taken up her profession (or volunteered for the post in an individual case) from motives of compassion, pity, and the desire to help the suffering, it will enable her to bear much without complaining. The patient, however, has it in his hands to lighten the burden very considerably. A smile and a word of thanks go a long way to reward a nurse for her exertions, cheering, strengthening and stimulating her to further efforts.

On the other hand, how discouraging are the fretfulness, the grumbling, the irritability of an invalid to one who is straining every nerve to bring about the patient's recovery and to enliven the monotony of his weary hours! Some sick persons seem to take a curious kind of pleasure in keeping their unfortunate attendants perpetually "on the trot." No sooner is one thing done and the nurse has returned to her seat, than the peevish voice demands yet another attention. This writer has known a captious patient to give her half a dozen orders in a breath, and scarcely had there been time to execute one before a torrent of abuse descended upon the luckless nurse, because, forsooth, one pair of hands (willing though they were) were unable to do the work of six!

The highest happiness is attained, not by those who grasp, but, by those who give. In sickness, as in health, this setting aside of self is a golden key with which we not alone solve many of life's hardest problems, but, also, open the door through which will enter two beautiful sisters, Joy and Peace.

Our own weaknesses we regard as misfortunes from which we cannot escape; the weaknesses of others we consider crimes.

EXERCISE AND PHYSIOLOGIC CHANGES

Voltaire once predicted that the end of all things would come when people take to reasoning. This crisis in our mundane affairs is, apparently, far distant, judging from the lacunæ of reasoning in many of our educated men and women. There is a daily increase in our knowledge, in our ap-

plication of knowledge, and a vast improvement in the development of human individuality; but, in some matters relating to our physiologic existence, there is an absence of clear incised reasoning. This is particularly marked in the advice regarding exercise given to the middle-aged individual.

The man who has in early life been accustomed to athletic sports ceases regular exercise as the demands of a busy career consume his time. At forty-five years of age, he finds he does not sleep well, is irritable, suffers often from indigestion and headache, and retrospectively thinks of his happy adolescent days. His physician advises exercise, whereupon the unreasoning man starts out enthusiastically to try to get his muscles, heart, and lungs into the condition they were in when he was twenty-five years younger. His physician has failed to warn him that he does not now possess the resistive power he once had against undue strains or poisons.

The excessive exercise he at once undertakes causes his muscles to throw off a greater amount of toxic material than the blood can carry away. The result is some form of autointoxication, which will demonstrate itself in one of the various neuroses. The habits of the individual, overeating, use, and frequently abuse, of alcohol, as well as of tobacco, have produced changes in the neurons and nerve-centers that have also probably caused an unphysiologic decadence in their delicate life units. That this is so, is shown by the restless, uncomfortable condition exhibited when he is seeking advice. The neurons are already in a retractive, irritable state, and to increase this irritation by the surplusage of dead material thrown off by the excessive contraction of the muscles evinces want of reasoning powers.

The effects of stimulants and poisons on the nutrition as well as on the kinesthesia of nerve-cells are, certainly, different at different ages of life, and recklessly to plunge into violent exercise after middle life is, to invite a condition that will exhaust completely an already depleted nervous system. Also, men who are approaching the climacteric often are told they need more exercise, when, in truth, they need more rest, physiologic rest. Exercise, of a nonexciting, nonexcessive nature, is necessary throughout life; however, it should be adapted to the age, temperament, heredity,

and physiologic condition, and follow the immutable changes of the inevitable physiologic decadence.

THE VALUE OF BOOKS

The following editorial is reproduced literally from *American Medicine* (Sept.), for the reason that it is so true and also that it would not be possible to express it better than has been done here; nor do the remarks of our contemporary require any comment or confirmation:

As a form of education, relaxation, solace and inspiration, books are the noblest companions of thinking men. He who reads only works on medicine is narrowing his horizon and limiting his usefulness. He who devotes the largest part of his reading-hours to fiction prepares himself for social intercourses, secures mental relaxation, but, scarcely improves his working efficiency. He who, starting with medicine and hygienics, delves into the literature of education, science, sociology, economics, philosophy, essays, fine arts, poetry, drama, history, travel, and biography, broadens his horizon, widens his mental experiences, develops his latent thought-powers, and ideals, and makes himself a unit of society, potentially capable and fitted for useful service.

Reading for diversion brings rest; reading for information secures intellectual enjoyment; reading for comfort develops repose and solace. Reading for inspiration brings courage, stimulation, and power.

The physician, as a teacher, can not accomplish his best results without the companionship of books. The work of the world that is worth while is perpetuated in writing, that all may read. The libraries of physicians attest their interest in human affairs, their consciousness of the worth of human thought and activity. They are a bond index of the interests, enthusiasms, and characteristics of their owners. They are vitally serviceable in the expression of his personality and provide a helpful background of his public and private life.

AEROPLANE AMBULANCES

Newspapers and popular magazines have recently referred to the attempt, being made at the front, of utilizing aeroplanes for the rapid transportation of wounded. This idea is based upon the proposal of a French

deputy, Doctor Chassaing, who was the first to specially fit up an aeroplane for this purpose. It has since been adopted and carried into execution in Italy also, at the suggestion by Dr. Ricardo Pongelli to the president of the Italian Red Cross Society. The General Commissary of aeronautics, in Italy, Mr. Chiesa, hopes shortly to inaugurate the new service of transport by air between the front and Milan or some other large hospital centers.

Commenting upon these facts, Dr. Henri Bouquet (*Monde méd.*, Apr.) remembers that the first one to suggest the utilization of aeroplanes for this purpose was a Dutchman, Doctor Le Mooy, in 1910. Two years later, Doctor Duchaussoy, professor in the medical school at Paris, urged the appointment of a commission to investigate the possibilities of this method. Trials were undertaken without, unfortunately, leading to satisfactory results, although the French Minister of War conceded that the aeroplane might prove useful in searching out wounded men on the battlefield.

Nevertheless, during the frightful retreat of the Serbian army, in 1915, the aeroplane, without any special fittings and under the pressure of absolute necessity, saved the lives of some thirteen wounded men who, rather than leave them in the hands of the Bulgarians, were transported from the interior of the country to Vallona, Scutari, Alessio, and St.-Jean de Medua. The resourceful ingenuity of certain aviators thus showed the practicability of the suggestion even under the most unfavorable conditions. It may be concluded confidently that the transport of wounded, by means of aeroplanes, is quite feasible; and, this mode of transportation has among others the great advantage of eliminating the excruciating pain often suffered by the wounded while being carried in ambulances, whether these be horsedrawn vehicles or motor cars.

We are quite able, while hating sin, to pity and be charitable to the sinner—when we happen to be the sinner concerned.

SANITATION AND MEDICAL PRACTICE IN TROPICAL COUNTRIES

It is a national characteristic of ours that we do things rather well, once our sincere interest is aroused; some say sneeringly: When our pocketbook is touched. That may be; and, if so, why not? If one is able to live comfortably, life is more likely to

be useful than if it is hurried and made miserable by want. However that may be, it is certain that, when after the Spanish-American war, it became necessary, for us to occupy Havana, one of the oldtime pest-holes of the Atlantic coast, means were found promptly to clean up the city, and surrounding country, so that Havana became one of the most sanitary and salubrious places of residence. When, some years later, it was up to us to carry into successful execution the old project of a Panama canal, it was very evident that the failure attending the earlier French attempt must be our portion also, unless suitable means were taken to make the Isthmus inhabitable for white people. That was done, and the Panama Zone now shows a morbidity and a mortality that compare very favorable with those of many regions in the temperate zone.

The sanitation of Havana, as also of some of our own southern cities, after the fascinating and wonderful investigation of Reed, Carroll, Lazear, Agramonte, and others, demonstrated that it is quite possible to make tropical countries safe for Caucasians to inhabit, incidentally diminishing the excessive morbidity and mortality of preventable diseases among the native populations. The means that were developed to this end within the memory of the present generation were utilized by business concerns having dealings with these countries, and the result is, that they have come to be, as they were intended, among the fairest places of residence on the inhabitable globe.

We are tempted to indulge in these cogitations by the perusal of a recent report (1917) issued by the Medical Department of the United Fruit Company, with main offices in Boston, Massachusetts, to the beautiful hospitals of which we referred in a prior article (Dec. 1917, page 923). This latest report makes very interesting reading, showing as it does what can be accomplished by careful sanitation and preventive medicine, and by appropriate treatment of actual disease. As is well known, the company operates a number of beautiful steamers, carrying both passengers and freight, the latter consisting mainly of the tropical fruits which it imports into the United States. Not only are the steamers themselves provided with unexceptional medical service and subject to the most careful sanitary and hygienic regulations, but, in

their various branches and depots, the United Fruit Company conducts modern hospitals and dispensaries in which its many employes are cared for.

The results of the thoughtful care extended to the entire service speak for themselves. It certainly is a good showing when, in 28,925 cases of malaria treated during the year, the mortality was only 0.19 per cent, that is, far less than the death rate given by Stitt for this disease in temperate climates.

As to ankylostomiasis (hookworm disease), 1,250 cases are reported as coming under treatment for this as the primary infection, while it constituted a complicating factor in many others being treated for some other disease. It is interesting, however, to note that examinations of stools indicate a gradual diminution in the frequency of hookworm infection. While, in 1914, 18 percent of the stools examined for ankylostoma were found positive, in 1917 only 10.5 percent of positive examinations were recorded, the frequency having diminished gradually and steadily. All cases of hookworm disease are treated with chenopodium.

Amebic dysentery caused considerable morbidity, particularly in the Costa Rica and Santa Maria Divisions. Of 185 cases treated in the hospitals, only 4 terminated in death, being 2.16 percent. Undoubtedly, the report says, this is due to the method of treatment adopted, where emetine is used in the acute conditions followed by bismuth subnitrate in enormous doses.

Several epidemics of typhoid fever occurred, in the Cuban Divisions, due to conditions arising from the Cuban revolution when laborers by thousands flocked to the plantations and lived under very insanitary conditions. Neither the water nor the milk supply were found to be responsible for the transmission, but, this seemed rather to be traceable to carriers. The epidemics were controlled in each instance as soon as the source of infection was ascertained.

There are many other points of interest that we might mention. Suffice it to add that the Carrel-Dakin method of treatment of infected wounds has been adopted generally, by the medical officers of the company, and it is reported that the results have been exceedingly satisfactory; this method not only having saved a large number of lives, but, also prevented a number of amputations following traumatism.

Leading Articles

Dermatological Notes—I

Eczema

By A. RAVOGLI, M. D., Cincinnati, Ohio

EDITORIAL COMMENT.—It is with a good deal of satisfaction that we present to our readers this article on eczema, by so experienced a clinician as Doctor Ravogli. It is to be followed, soon, by a further one on the treatment of this annoying condition; and, we hope that the author may consent to contribute papers on the nature and treatment of other skin affections which cause so much trouble to the general practitioner.

ECZEMA, one of the most common of all the diseases of the skin, has been recognized in antiquity and so named from the Greek *ek*, out, and *zeo*, to boil, Latin, *effervesce*. We take up some considerations on this subject, not because we have anything new to say on this disease, but, only because it is not in general well recognized, is not justly valued in its entity, and is usually not treated rightly. As a consequence, the patients are frightened by the name of eczema, because they believe it to be the incurable systemic disease, which will trouble them all life long, and will probably be transmitted to the children—all of which is entirely wrong.

The most classic description of eczema was given by Ferdinand Hebra, and his definition was nothing more than a brief description of the disease. Indeed, Hebra, in elucidating eczema, started from the idea of a local inflammatory process of the papillary layer, resulting from the application of any irritating substance to the skin. From his experiment with croton-oil applied on the skin, he was able to bring together a group of symptoms which formerly had been considered separately. The authors before Hebra had described eczema from the predominating symptoms. Gorræus (1578), "*pustulæ ardentes et fervida, dolorem cientes citra sanie*m," made pustules the principal character of this disease. Willan gave a good description of eczema, as an eruption of clustered vesicles, noncontagious, which, after the absorption of the fluid contents, are changed into epi-

dermic scales. The eruption can be produced from internal systemic conditions or from external irritations. Although he spoke of an eczema impetiginosum, he, yet, separated impetigo from eczema. He grouped together all traumatic dermatitides under the word of eczema, for the reason that vesicles were the prominent feature.

Hebra's Instructive Experiments

Hebra started from the idea of a local inflammatory process identical with the action of croton-oil on the skin, which he claimed to show the different varieties of eczema. When croton-oil is painted on the various regions of the body, it will show its effects after a few hours. On the penis and scrotum, a violent edematous swelling, red effusion, and small vesicles will make their appearance; on the face, milder swelling, redness, and discrete vesicles will mark the application; on the extremities, red papules and vesicles will occur. Left to itself, the inflammation will subside in a short time, the swelling disappear, and after a few days only a little pigmentation and a scaliness will mark the place where the inflammation had taken place. Hebra continued with the applications of the croton-oil to the already inflamed surface, and then the skin showed deeper-seated effects in the form of papular eruption; for, the exudation is not merely subepidermal, but, is present deep in the papillary layer. Yet, left to itself the skin will easily return to normal. If now, however, new applications are made,

the inflammatory process will extend much deeper, not remain limited, but, will spread along the surface of the skin that had not been touched by the croton-oil. The exudation will become so abundant as to detach the epidermis, which breaks and leaves the papillary layer denuded, excoriated, with serum oozing on the surface; in some vesicles, the serum will easily change into pus, and thus give rise to formation of true pustules. The serum mixed with pus and some blood, when exposed to the air, will dry up and cake upon the excoriated surface and form crusts that are more or less thick.

The inflammatory process with all its results, will, at first, produce an itching sensation, this gradually changing into a painful itching. The itching compels the patient to rub, thus increasing the irritation and the excoriations. The inflammatory symptoms gradually subside, the exudation diminishes, the crusts dry and finally fall off, leaving the new surface with a healthy epidermis, slightly infiltrated, red, and covered with epidermic cells.

In these experiments, Hebra found repeated the features of all the varieties of eczema—erythematosum, papulosum, vesiculosum, rubrum, impetiginosum, and crustosum. Furthermore, he failed to observe that painting the skin with croton-oil produced not an eczema, but, a dermatitis and which must be distinguished from eczema, for, when the applications of the croton-oil were continued, so that vesicles and then pustules and eventually red excoriated surfaces covered with crusts resulted, he had produced real eczema.

In our younger days, in the laboratory of the College of Medicine and Surgery (now many years defunct), we shaved the ears of several rabbits and then painted them with croton-oil. This produced an inflammation and little vesicles, which in five or six days had completely disappeared, leaving a little desquamation. One ear was left to heal up, the other ear was inoculated with a culture of staphylococcus pyogenes albus. This started pustules, crusts, and all the symptoms of eczema, which lasted for more than ten or twelve days. This observation gave us the firm conviction that eczema is caused by the presence of pus-cocci. In this same way, Hebra started a dermatitis with his croton-oil, but, by continuing the applications, deeper lesions were produced, which, in-

fectured with the ubiquitous staphylococci, turned into a true and real eczema.

Everybody has seen patients suffering from otitis media purulenta, who, having an abundant discharge from the ears, show eczema of the auricula of the concha and of the periauricular region. Often a recurrent eczema of these regions of the skin prompts the physician to look for the focus of infection, and this is found in the seropurulent accumulation in the middle ear. Eczema of the lips, at the angles of the mouth, is nothing but the result of pyorrhea from diseased gums. Eczema of the nostrils is the consequence of nasal catarrh.

Eczema Defined

Summing up, then, all these observations, we do not hesitate to define eczema as being a *catarrhal inflammation of the skin, produced by the action of pus-cocci*.

When a man exposed to very cold air has the mucous membranes of the respiratory tract inflamed, he has an acute attack of coryza, and in three or four days he will be well again. If, however, pus-cocci infect the irritated mucous membranes, then it no more is a simple coryza, but, it becomes a catarrhal rhinitis, pharyngitis, and so on; and will have an injurious effect on the general system and will take some time to become cured. Many other examples can be given of stubborn cases of eczema, which after awhile easily yield to treatment when the pus focus has been found and eradicated. Pruritus and eczema vulvæ can be treated for years with every kind of remedies without one's accomplishing anything. Then, after introducing the vaginal speculum, infection of the vagina or of the cervix is found, and then, when these conditions are treated, the eczema is easily cured. In men, eczema of the rectum, associated with unbearable itching, is usually the result of stricture of the urethra, of prostatitis, vesiculitis or of hemorrhoids. The seropurulent discharge on the skin causes the itching, the patient scratches, the pus-germs are inoculated, and thus the eczema is produced. Eczema of the perianal region, of the buttocks, and extending to the genitocrural region in children, always has as its cause diarrhea, an enterocolitis, with mucous discharge.

The spreading of the eczema over the surface of the skin does not militate against

our views. Since the skin is a continuous membrane, when it is irritated at one point, it is easy for the inflammatory process to spread along its surface. In fact, the eczema caused by professional occupations, such as the eczema of the hands from working in cement, soon affects the arms and often spreads to the face and neck. The skin, once irritated, is much more liable to be affected by the staphylococci, and these, though once innocuous, become pathogenic and then reproduce the disease.

In cases of diffused eczema, we often see furuncles, folliculitis, pustules, of the hair-follicles that are the production of a more virulent sort of pus-germs. Both the staphylococcus luteus and the citrinus, are found in the furuncles, a kind of cocci that often accompany the less virulent staphylococcus albus. When the pus-germs invade the funnel of the follicle of the hair, suppuration is produced, in the form of a pustule having a hair in the center. Folliculitis of the upper lip often accompanies eczema of the nostrils.

Eczema, in some instances, has an acute course; mostly, it is chronic. Many cases not only are stubborn to the treatment, but, when nearly healed up, have a tendency to relapse. The eczema mercuriale (so-called by Willan, because produced by mercurial applications or by other irritating substances, e. g. arnica, irritating plasters, etc.) was separated by Rayer from true eczema. These inflammatory processes of the skin, as produced by irritating substances, are merely dermatitides, and they heal up easily and in a short time, in remarkable contrast with true eczema, which by nature is chronic and resistant to treatment.

Regional Eczema

Rayer was the first to study eczema of the different regions, or regional eczema. The difference of the symptoms in the different parts of the body sometimes makes difficult the diagnosis, and this gave origin to the peculiar terminology applied by the older dermatologists to the same disease eczema in different parts of the body (Porigines, impetigines, etc.).

It must not be forgotten that eczema is, at times, acute, while more often it shows stubborn chronicity. The old idea of the presence of vesicles as pathognomonic of eczema was gradually set aside, and Devergie comprehended the symptoms of

eczema as redness, itching sensation, serous discharge, and *état ponctue* — eczema rubrum. The idea of a diathesis as a factor of eczema was discarded, the *eczème dartreux* and *eczème arthritique* of Bazin and Hardy were found to be predicated only on a vague theory, as vague as is today that of the rheumatic and arthritic diathesis. In general, those affected by eczema are in good health, scarcely ten percent of all the patients being found suffering from other diseases. For Bazin, eczema is only a vesicular eruption, from a reaction of the skin to some internal or external irritation.

In a general way, we can not disagree with the view of Hebra, so far as it concerns the clinical symptoms of eczema. We have often remarked that Hebra, by means of the application of croton-oil on the skin, produced a dermatitis, and not an eczema. With the successive applications, he changed dermatitis into eczema, on account of the lesions being invaded by the pus-producing germs. In this way, he confused dermatitis and eczema, and also eczema impetiginosum and impetigo.

Rayer had already described the regional eczema of a chronic form, as affecting different regions of the skin, and had already separated the artificial inflammatory process of those skin affections, which Willan had grouped together with eczema. It seems that the symptom of the vesicle is nearly inseparable from the syndrome of eczema, and Bazin always maintained that, although in an acute eczema vesicles can not be seen, yet, with a magnifying glass or by oblique light, small miliary vesicles can be seen on the surface of the inflamed skin. The presence of small vesicles in acute eczema was considered a pathognomonic symptom by Hebra, who pointed them out for differential diagnosis between acute eczema and erysipelas.

Eczema may affect anybody at any age and in any part of the body, as a peculiar polymorphous affection. Eczema is changeable in its appearance, and quite often it would suggest the idea that it represents, not the same disease, but, a group of diseases.

The Symptoms

Although the experiment by Hebra with croton-oil tends to confuse dermatitis with eczema, yet, it explains the symptoms of eczema clearly, and especially for the gen-

eral practitioner it gives a good idea of the symptoms of this disease.

After painting the skin with croton-oil, a diffused redness of the skin occurs, with swelling, and, studded with small miliary vesicles scarcely perceptible with naked eye, erythematous eczema. The vesicles soon break and a quantity of serum oozes out, which, clear at first, gradually becomes turbid and sticks to the linen—eczema madidans, *weeping eczema*. Repeating the application of the croton-oil, under a stronger inflammation, the deeper layers of the skin are affected and small nodules are formed, papules clustered together. They often are changed into small vesicles, which surmount the papula, and by scratching they become excoriated and covered with crusts. In some parts of the body not much exposed, as the chest, shoulders, abdomen, they remain as small reddish papules, forming the variety of papular eczema.

In some cases, the papules are changed into small vesicles, which after awhile are covered with scales or scaly crusts, according to the quality and quantity of the exuded serum. When the cuticle has been detached from the lower layers of the epidermis and rubbed off by the clothes or by the finger-nails, a red raw surface is left, showing the red papillæ, discharging abundant serum—eczema rubrum—*état ponctué*. At this point, the eczema is very troublesome and when extensive compels the patient to remain in bed. At this period, the eczema may be covered with thick yellow crusts and take on the appearance of eczema impetiginosum. In this case, the serum discharging from the abraded surface is mixed with pus and the crusts are thick and yellow-brown in color.

When the epidermis has been distended by the edema and swelling of the tissues of the derma, and these begin to return to normal, the epidermis is no more capable of covering the surface, and forms a kind of dry shreds, called scales, desquamation. The size of the scales is from branlike to that of horny lamellæ. In some cases, eczema has never shown vesicles, but has begun as a red surface covered with dry scales. The epidermis has lost its elasticity and under the scales cracks and fissures are formed, which sometimes may bleed. Nobody can deny a squamous eczema, where the predominant symptom is the formation of scales, as it is seen in

eczema of the fingers and of the palms of the hands. In our view, the scales are secondary to the inflammatory process, as a necrobiosis of the epidermic cells.

Eczema is always accompanied with an itching sensation—a subjective symptom not exclusive to this disease. It is very intense and compels the patient to scratch and rub, so increasing the irritation and the lesions of the skin. The exudation between the papillary layer and the epidermis is the cause of the itching. At any new eruption of vesicles, the itching is greatly intensified. In cases of dry eczema, squamous eczema, where the skin is thickened, hardened, and cracked, itching is present. The exudation from fissures moistens and macerates the epidermis in the folds of the skin, which causes the itching. Unbearable itching is caused by the eczema of the scrotum, when the skin is red, hard, swollen, edematous, partially covered with scales and innumerable cracks, the patient being prevented from sleeping. The finger-nails voluntarily or involuntarily are used freely, digging excoriations, which only increase the irritation. Oozing of serum takes place, and this increases the sufferings by producing a dermatitis on top of the eczema.

Eczema may be acute, and recurring in type. Acute eczema is not easily differentiated from dermatitis, but, yet, when recurring, without there being an external irritating cause, and possibly caused by purulent foci, it is diagnosed as acute eczema. The feature on which Hebra so much insisted was, the diffused redness, the presence of small vesicles, and the oozing of serum. Eczema, however, in most of the cases, is chronic in type; the tendency to chronicity being one of the characteristics of the disease. Chronic eczema often is subject to reactivation, so much so in many cases, that, when we think to have brought it to recovery, then, either from dietetic errors or from inopportune local application, it starts all over again as a fresh acute eczema.

We consider eczema an inflammatory process of the skin, mostly chronic in type, of parasitary origin, revealed by redness, swelling, with small papules and vesicles clustered together, originating oozing of serous secretion, with excoriations, formation of crusts and scales, accompanied in all its stages by an itching sensation.

The Medical Practitioner and Cancer

What Should the Medical Practitioner Do about Cancer?

By L. DUNCAN BULKLEY, A. M., M. D., New York City

Senior Physician to the New York Skin and Cancer Hospital

EDITORIAL COMMENT.—In his numerous publications on cancer, Doctor Bulkley sounds an encouraging note, for the reason that he affords a guide for the recognition of cancer disease before hopelessly inoperable lesions have developed. More, by opposing indiscriminate surgical interference, and outlining the means for successful treatment, the author renders a great service to physicians and patients alike. The cancer problem is one of the most important ones before the medical profession. Its careful study will be repaid manifold.

THE answer to the question, "What should the medical practitioner do about cancer?" in accordance with modern custom, seems plain, namely, "Leave it to the surgeon." But, why, and is this really the correct thing to do? Or, shall the disease be left to the advertising quacks?

It is now pretty generally believed by the medical profession and the laity that surgery offers the only hope in cancer. However, I hope to show that real cancer, other than epithelioma of the skin—on which latter so many of the arguments for surgery are based—is a medical rather than a surgical disease, and that with proper and prolonged dietary and medical treatment the results are far better than from surgical intervention. Careful medical attention must be given to the disease if we ever hope to diminish the distressing increase in its morbidity and mortality, as I have many times tried to show.

The reasons why the medical profession and the laity have so universally accepted the dictum that cancer belongs to the domain of surgery are not difficult to discern.

The medical profession, being occupied largely with acute disease, with apparently definite and speedy results, very naturally became discouraged by the unsatisfactory course commonly opened in cancer; as was the case in regard to tuberculosis, until the revival of interest in the latter in recent years, with the well-known beneficial consequences, to be considered later.

Then the surgeons took up the treatment of cancer, and, as the wounds generally healed well after excision and the immediate results of the operation seemed favorable, little thought seems to have been given to the constant recurrence in subsequent years, for, unfavorable statistics are seldom published.

By the brilliant advances in modern surgery along many lines, the laity have

become so obsessed by the idea that in many directions its possibilities are limitless that the cancer-patients have constantly yielded themselves to the knife, in the face of the steadily rising mortality of late years. The glamor of surgery and its often spectacular results have quite blinded the eyes of many to real facts.

The enormous accomplishments with the microscope with reference to the minute structure of the diseased tissues and the elaborate and extensive work done in animal experimentation, together with the expressed opinion of many laboratory-workers, that cancer is a local disease only requiring early extirpation, have turned the thoughts of many away from the homely and practical studies of the human frame in its various departures from health. In this way, relatively little attention has been given to its biochemistry and the deranged activities of the various organs. We have also studied too little the perverted metabolism resulting from the stress and strain of modern life, together with the temptations as to eating and drinking that accompany the present intensity of present-day civilization.

Cancer being left to the surgeons, it is hardly to be expected that they would incline to any other treatment than that with the knife. Nor would one expect that the surgeon would think along medical lines and investigate metabolic conditions, when the immediate results of operations seem, often, to be so satisfactory. Neither would one expect the surgeon to seek from statistics the unfavorable aspects of this line of treatment, but, rather, those from which he could draw encouragement in trying to overcome so dire a disease.

It is to be observed, however, that of late years even the surgeons have extended the time after which cancer can be said to be cured, from a former two

years limit, to three, five or more years, while some are candid enough to say that no definite period can be set, for, often recurrences have been observed ten, fifteen or twenty years after surgical removal. This agrees entirely with the more rational view of regarding cancer as a constitutional, metabolic disease, which may manifest itself anywhere and at any time, whenever the systemic conditions of the individual are suitable for a new development of the malignant newgrowth to be generated.

What, then, should the general practitioner do with reference to cancer?

Deaths from Tuberculosis and Cancer Compared

Let us look for a moment as to what proper medical, dietary, and hygienic treatment has done for tuberculosis, despite the persistence of tubercle-bacilli in affected subjects.

In 1900, in the registration area of the United States, 201.9 persons out of each 100,000 population died of tuberculosis. In 1916, under careful medical guidance, the number of these deaths had fallen to 141.6, or a decrease of 60.3 persons per 100,000; in other words, 29.86, or almost 30, percent.

Now, during the same period, the recorded deaths from cancer had *risen*, under active surgical care, from 63 per 100,000 population, to 81.8, or 29.84 percent—almost exactly the same percentage that deaths from tuberculosis had *fallen*. Thus the death rates of the two diseases have approached each other with an amazing regularity almost 60 percent, so that, while in 1900 they were 139.9 points apart, in 1916, they were only 59.8 points apart; at this rate of increase of cancer deaths and decrease in the deaths from tuberculosis, the former will soon claim more victims per 100,000 population than the latter.

It may be interesting here to mention the latest information in regard to the cancer death rate in New York City, as obtained by a study of the actual figures furnished by the local board of health in its weekly reports. During 1917, there were 4,589 deaths recorded from cancer in New York City (2,143 males and 2,716 females). This total number divided by 365 days gives an average of 13.33 persons dying daily from this cause in New York City! During 1916, there were 4,635

deaths from cancer, or, an average of 12.68 persons per day. Further: in the year 1917, there was a total of 78,467 deaths from all causes in Greater New York, against 77,948 in 1916—an increase of 516, or less than *one* percent—whereas the increase of cancer deaths was 224, or over *four and one-half* (4.5) percent.

What, then, I again ask, should the general practitioner do in regard to cancer?

Evidently, he should not pursue a plan of treatment that shows a steadily increasing mortality, so that now it is about agreed that 90 per cent of those once affected with cancer die from it! This would not be tolerated in any other disease.

It is high time, indeed, for the medical man to take up earnestly the study of cancer in its medical relations and to seek to understand its cause and to seek to rectify the systemic errors that lead to the formation of heterologous, malignant tissue, or tumors, instead of to the homologous tissues of health.

Cancer a Phenomenon of Perverted Metabolism

The limits of this article do not allow of a discussion of the real nature and cause of cancer and its medical treatment, which have been pretty fully presented elsewhere¹, but, a few practical suggestions may not be out of place.

All nutrition, good and bad, comes from the food and drink taken. Under normal conditions, the cells of the various tissues of the body are continually subjected to *katabolism*, "a breaking down of complex bodies of living matter into waste products of simple chemical composition," and *anabolism*, or "the process of assimilation of nutritive matter and its conversion into living substance"; these together constituting *metabolism*. In effecting these metabolic changes in the system, the various secretory and excretory organs of the body, including the ductless glands, each perform a certain part, and in health the final results are carried off by the lungs, kidneys, bowels, and skin, in an orderly manner.

In various chronic disorders of the system, from different causes, including errors in eating and drinking, there is some disturbance in the operation of some of the organs, with an altered blood current, and there result various derangements in the tissues, to which derangements we

¹Bulkley: "Cancer, Its Cause and Treatment," vols. 1 and 2. P. B. Hoeber, New York.

apply, respectively, the names of different diseases, one of these being cancer.

Cancer is simply the misgrowth of epithelial cells, such as had previously been normally produced—as all pathologists agree. Microscopic studies have demonstrated that within the cells the earliest cancer-genetic change is found in a certain disturbance in the polarity of the cells; also in the relation of the centrosome to the nucleus, whereby the cells multiply; by a deranged karyokinesis, in an irregular, luxurious, and riotous manner, this resulting in what is known as cancer.

Why or just when certain cells begin to take on this heterologous action has not been determined: for, no one has ever seen and recognized the very beginnings of the malignant process in true, internal cancer, any more than has been seen and recognized the first inflammatory change in the tissue of the gouty toe, and the like. Suffice to say that there must be a cause; and this has been well defined as a sub-catabolism, induced by hyperacidity or oxydase deficiency in the surrounding medium or blood plasma, especially through the agency of the myeloid leukocytes, which contain a ferment of the oxydase variety.

All this speculation, though, and much more that has been advanced, really helps us very little in explaining the true pathogenesis of cancer; still, it has its practical bearing with regard to the prophylaxis and treatment of the disease. For, oxydase has the property of deamidizing, that is, destroying amidoacids, or the nitrogenous elements, which have been found by many observers to be at fault in cancer-patients.

This leads us to the subject of the influence of the nitrogenous diet in the production of cancer, which I have previously shown, statistically, clinically, experimentally, and analytically, to be a predominating element in the causation of this malady. Several observers have confirmed the existence of a faulty splitting of nitrogenous elements and an increase of amino-acid nitrogen in those afflicted with cancer.

In view of all this, once more, what

should the medical practitioner do with regard to cancer? Of course, it is readily seen that the mere excision of the particular local lesion which has developed somewhere never can eradicate the systemic error that produced it and which probably will cause a recurrence: nor can the x-rays or radium-treatments be expected to effect such a change.

All surgeons agree that about 50 percent of the cases are inoperable when first seen by them. Of the remaining 50 percent few claim more than 25 percent permanent cure of the general run of cases, excluding those of skin-cancer. This makes only 12.5 percent of the total number of cases of true cancer, or about 90 percent of deaths, when we consider the number of cases lost sight of or with late recurrences.

It would be quite impossible here to indicate the exact lines of treatment, dietetic, medicinal, local, and so on, that the medical practitioner should pursue, and which have been more or less detailed elsewhere.

As the surgeons have been so strenuous of late on insisting on the early recognition and treatment of cancerous lesions, so as to medical treatment the best results can, undoubtedly, be secured by the earliest possible detection of the disease. As patients recognize that they can escape the knife and that there is a far greater expectation of cure by means of proper and prolonged medical treatment, they will be less inclined to hide the trouble until too late, and it can be more easily overcome by proper medical care.

People, therefore, should be encouraged to report any questionable signs of the disease at the earliest possible moment, and the case should be minutely investigated and active treatment begun at once, and continued even long after all tangible signs have disappeared for some time. For, the dietary and other proper measures looking toward the correction of the faulty metabolism leading to the disease are harmless and often beneficial to those who may not have cancer. In advanced and even inoperable cases, very active treatment may often be of the greatest service, as I have elsewhere shown.



Impressions of Military Medical Service in the U. S.—III

By MILES MEDICUS, Somewhere in Camp

IT MAY be asserted with confidence that the outcome of the present war will be decided by psychic factors. The first dash of the enormously strong and well-prepared German army might have been successful, from purely material force. But, its strength and preparedness was the result of psychic factors operating for nearly two generations, while the weakness and unpreparedness, in varying degrees, of the antagonists likewise were psychic. The case was, on a large scale, exactly the same as if a neighbor cleaned and loaded his revolver while we looked on with friendly interest over the back fence and as if he actually told us he was going to shoot us or one or two of the other neighbors.

According to the modest expressions of some French officers, Germany's failure to win in the first dash also was due to psychic factors, and not so much to the heroism of inferior or at least less prepared forces as to the psychic factor of overconfidence which led the Germans to delay closing in on Paris, in order to allow the crown prince or the emperor himself to be present, and, during which delay, as it is asserted, the good French wine reduced the efficiency of the German troops. At the present time, psychic factors alone may be said to continue the war, whether we view the matter from the German or the Entente standpoint.

Officers, Snobbish and Otherwise

It may be pardonable, therefore, to consider various minor illustrations of the psychic makeup of the men in our army. The distinctions of rank obviously are necessary in the maintaining of discipline, or, at least, they are so considered by everyone who knows anything about military matters, and men in a few weeks after leaving civil life take to them naturally. Still, there is a sensible and a silly way of carrying these distinctions into practice. For example:

The writer's commanding officer is a strict disciplinarian, but, he will not take a chair from a subordinate and he dislikes

anything approaching deference to rank at mess or in social gatherings. Some officers of not very exalted rank rather expect privates to give them seats in street-cars and picture-shows, when others, urged to accept such courtesies to rank, refuse, on the ground that it would be a species of graft. At a public table, one officer ignored a private, while another treated him with the same courtesy that he accorded to any other chance companion. It turned out that the private was far ahead of that supercilious officer, both in table-manners, education, and even in certain matters that it might be considered snobbish to mention. As for the snubbed private, he had been barred from an officers' training camp on account of a minor physical defect; he had tried to enlist and had been rejected; and partly by his own efforts to improve his physical condition, partly because of a gradual reduction of standards of requirements, he was, on the third attempt, allowed to enlist as a private.

There are ways that do not transgress the necessary rule against undue familiarity between officers and privates or between officers of different rank and that nevertheless allow a very friendly feeling to grow up. To mention personal experience, the writer has found generals and colonels very affable either as patients or at social gatherings and the sole discourtesy that he could even imagine (and that was not so obvious as to compel notice) has come from one of the same rank as his own, and rather doubtful seniority.

One of the bitterest complaints by surgeons of former wars has been their lack of authority to enforce sanitary regulations and the personal discourtesy shown them by line-officers, at least to the degree of insisting upon using the title of doctor instead of the military one. All this may be said to have been done away with. So far as the cantonment with which the writer is connected is concerned, it may be said that the commanding general and his staff not only back up, but, would, if necessary, jack up the surgical staff. Line-officers

generally take an interest in sanitation, request the intervention of medical officers to correct every manner of sanitary defects, not only through military channels, but, whenever they encounter them.

To a surprising degree, the rank and file of the army show the same spirit of intelligent cooperation, even when their education and previous occupation would seem to render them incapable of understanding such matters. As part of the policy of fair play to all men in the army, any patient leaving a hospital is entitled to file a complaint. The only complaint of which the writer has had personal knowledge was a criticism as to the lack of individual drinking-cups—a defect fully realized and due to the impossibility of securing, without delay, everything needed.

The Salute

It should be stated, however, that the strictly personal equation enters into the psychology of military life. One finds even amateurs anxious to courtmartial men for every slightest infringement of rules, while others will try to avoid making trouble for their associates and inferiors and prefer to discipline by admonition and an appeal to a sense of duty and patriotism. One young surgeon, for example, says that he gets more salutes when wearing his overcoat, which indicates his rank, but, does not show to what branch of the service he belongs. A captain claims that when he is wearing his slicker so that only his hat-cord and puttees indicate that he is some kind of officer—the chances being three to one that he is a lieutenant—he gets fewer salutes than when his rank is evident. Others discover no difference. Some privates consider the salute a degradation and avoid it whenever possible, under the excuse that they are working, that their hands are full or that it is too dark to see. Others rightly regard it as a sign of comradeship and realize that even the obligation of saluting first applies to themselves no more than to officers, except in a percentage sense.

However, much depends upon the attitude of the officers. Prompt acknowledgment of a salute, the removal of a cigar before returning the salute of a private accompanied by a lady, a friendly expression of the face, an avoidance of places where privates are resting, so as to save them the trouble of springing to attention and saluting, a word or smile in acknowledgment of

a salute requiring the shifting of a burden or of a crutch or when the salute is made with a bandaged hand, all this goes quite as far as reiterated orders for securing universal courtesy in military form. One officer told of seeing a young lieutenant actually return a private's salute by bringing his thumb to his nose. Hospital patients are rather prone to take advantage of their status, to avoid salutes. One officer put it to such a man in this way: "Are you here under guard?" "No, sir." "Then you are not a prisoner who is not allowed to salute, but, a soldier in good standing, who is *privileged* to salute."

The Problem of Feigned Disability

While the general courage and morale of the army are excellent, the surgeon is rather likely to be impressed with the exceptions. It often is difficult to distinguish between actual cowardice and mere selfishness which prefers civilian life, with its comforts and ease and freedom, to the exactly opposite conditions of military service. Rather unjustly, since the draft has been announced as a fair method of levying a kind of government tax, a drafted man assigned to a regular-army or national-guard organization often has a hard time; yet, it does not appear that the national army is deficient in the military spirit, and gradually the prejudice against the drafted individual passes if he attends to his duties. Line-officers, rather than surgeons, have had the opportunity of observing the development of individuals and bodies of men, from cowardly or at least unwilling soldiers, into those filled with a proper spirit.

On the other hand, the surgeon has, perhaps, the better opportunity of diagnosing the psychology of the individual in regard to these psychic factors. Often the line-officer is convinced of the physical inability of a soldier, when the surgeon is equally convinced that the man is a malingerer, or, the line-officer or the man's companions believe him to be a skulker, when the surgeon knows that his incapacity is real. For example, one of the best-behaved and most helpful patients, who had been retained in the hospital for a long time because of a carious bone, was much distressed at the rumor that his tent-mates considered him a coward. This man begged for any kind of radical operation that would hurry him to recovery.

Malingering may be plain or it may be subconscious, taking the form of a hysteric

lameness or psychic suffering or it may actually pass to the stage of mental alienation. The persistent malingerer can always win out in the end. Perhaps with the idea of excluding malingerers, the army does not recognize "muscular rheumatism" as a proper diagnosis, yet, its reality in civil practice scarcely is questioned. There is no accepted method of judging as to the existence of pain in another individual, especially when the ordinary accepted reasons for pain are not clearly present. Here is a case: an officer, while awaiting the call to active service in warm weather and blessed with every home comfort, suffered from a localized pain for weeks and, so, feared that this would incapacitate him. He accepted the call, said nothing of his condition at the time, and then, when subjected to the hardships of military life in cold weather, became completely relieved. Turn the case around, and one can judge of the helplessness of the surgeon as to expressing a positive opinion, one that would pass in a court martial or before a board of inquiry.

A good many men enter the army without pleading exemption for physical causes, some honestly expecting to experience relief from the condition, others carried away by temporary enthusiasm. Under the grind of drill, the expected relief may not occur or the enthusiasm may be supplanted by the overwhelming desire to get out of the army again. Who can tell? Men have had themselves patched up in all sorts of ways, at great expense and suffering, in order to enter the army, others are willing to take advantage of any preexisting abnormally or genuine acquired exacerbation or fresh development or to hypothecate a disease, in order to get out. Each case must be judged by itself.

One sees men bitterly disappointed at being discharged for heart lesions, chronic renal lesions, incipient tuberculosis, and the like. On the other hand, comparatively minor lesions are magnified in the patient's complaints, to secure discharge. One of the most amusing things is, to see a man flourishing when he has a "full house". In plain words, not realizing that he has some condition necessarily demanding his discharge from the army, such a one fabricates the flimsiest imaginary physical or mental defect. From entirely different sources, the writer has heard the following story—told as true—of a private and of a

surgeon at an instruction camp. The man went about the camp picking up and eagerly scrutinizing pieces of paper, until everyone was convinced of his mental deficiency. When he secured his surgeon's certificate of disability, he shamelessly laughed at his victims and said, "That's the paper I was looking for."

In some instances, one is reminded of what fire-insurance men call the moral hazard. For example: Orthostatic albuminuria, hemolytic jaundice, certain anomalies of bony development, painless flat foot, and many other conditions may lead the surgeon to favor a discharge, because, without any actual need of so doing, the individual can at any time present evidence that he ought to be discharged. It obviously is better to discharge such a person before much time and money has been spent upon training and transporting him to the front. The course of action may, however, at the discretion of the surgeon, be governed by the psychic standard of the man himself. The army is, practically, at the mercy of any man who has had his appendix removed. Such a person can always claim to be suffering pain, describe the symptoms of typhlitis, vomit or induce diarrhea by food or drugs taken, or simulate it by frequent visits to the latrine. So, too, almost anyone can vomit or by gagging and hawking even can spit blood. Nor are many persons, especially when exposed to the vicissitudes of weather and to the necessarily somewhat crude diet of army-life, entirely free from colds of some sort or from digestive disturbances.

Doubt as to Enforced Operation.

It is doubtful whether the rule that a soldier must submit to a necessary operation can be enforced, especially when the administration of an anesthetic or even a capital operation itself certainly does involve an element of danger that a conscientious surgeon would admit or that a court-martial or board of inquiry would have to accept as legally established. But, even if the operation be insisted upon, the problem is only postponed.

As a matter of fact, no one is absolutely in perfect health, and the man who really wants to get out of the army can succeed by perseverance. It must also be remembered that many men, perfectly able to engage in civil pursuits, especially those that are mainly sedentary, without presenting actual disease, are at the time of enlist-

ment physically unable to perform the manual labor and endure the fatigue of the various drills, especially the double-time ones. Young men may lack the general stamina to acquire the circulatory, respiratory, and muscular strength required and older men are, probably, unable to undergo the histologic changes necessary. Yet, even in this regard, there is much malingering as well as much failure to make good, without there being actual malingering. In other words, the psychic element is important.

Importance of the Psychic Element

Granted that a man is not really a malingerer, is anxious or at least willing to serve in a military capacity, but, in some special form of work not involving great strain and hardship, there are two diverse solutions of the problem, both well supported in theory. One way is, to adapt each man to a special form of work, agreeable to him and within his mental and physical capacity, and to keep him at that work. The other is, to have every man in the army physically, mentally, and volitionally or by compulsion ready to do any form of drill or other duty required of the average soldier—this theory, of course, not extending to recognized experts, such as electricians, mechanics of high grade, surgeons, dentists, and such like. At present, the weight of authority leans strongly toward the latter theory; and this somewhat increases the responsibility of the military surgeon, as he has to deal, not only with the malingerer who wants to get out of the army altogether, but, with the man who wishes to escape routine drill, while willing or at least saying he is willing to perform some special form of duty.

Contrary to the writer's expectation, there seems to be little trouble in regard to malingering from a class of men who, while possibly longing for the excitement of warfare at the front, would seek escape from prolonged service in camps in this country. This does not mean that the malingerer is, necessarily, a coward or that men generally are contented to stay indefinitely in cantonments, but, means merely that no appreciable number of cases indicate a sharp differentiation between cowardice and tedium. There is one potential case of this sort in which the writer has had considerable opportunity to study the psychology; that is, his

own. Fortunately, this subject, while very anxious to go across, and, yet, for purely personal reasons preferring, as he does, civil life to that in a cantonment—means to stick it out.

Seriously, it has sometimes seemed that it might be worth the trouble of transfer and special arrangements for transportation to put it up to every man who spends much time in the hospital and asks to be excused from drill, and who does not present well-defined disease, that he can go across just as soon as trains and ships can carry him. This would clarify the atmosphere in a good many puzzling conditions.

Some of the most interesting and paradoxical cases are those coming under the scope of the psychiatry-boards. One of the big credits against the cost of the war is, the actual knowledge of the nature and number of these cases. It is, of course, disconcerting to realize that one percent of our young men are mentally below par, that the smug suggestion, that the war be fought by men who were out of jobs, cannot be carried out, because to a large extent the men who do not hold their jobs are mentally deficient, that the country must protect and help this part of its population. Still, it is always worth while to know the truth, however disagreeable.

Of course, the neurologic service does not confine itself to the Binet phase of psychiatry, for, it detects, also, a surprising number of atypic epileptics, the kind of men who would be shot for sleeping at their posts, moral imbeciles, men of various types of insanity, often unsuspected, victims of rare organic lesions or anomalies and of late manifestations of syphilis. This service gets the subconscious malingerers, those who have frightened themselves into various manifestations of hysteria. Perhaps a special subdivision should be made of the men who have, more or less voluntarily at the beginning, acquired some peculiar gait, impossible of explanation on the ground of sparing a strain of any part of the locomotive apparatus, but, on the contrary, fatiguing and tending to produce strains of joints, and even ultimate deformity in extreme cases. So well known is this subdivision that, if you see an officer limping and ask the reason, the chances are he, instead of admitting a

corn or a bruise or sprain, will make a joke of his misfortune and tell you that he is practicing an S. C. D. (surgeon's certificate of disability) gait.

One not especially familiar with psychiatry and accustomed to use such words as an expert and one skilled in comparison with very high standards is, at first, surprised to learn that a considerable number of soldiers have the mental development of such low-age standards that they scarcely can count, make change, take care of themselves or learn the comparatively simple evolutions of the drill. On the other hand, there are even greater surprises in the opposite direction. One of the best-behaved patients—courteous, intelligent on superficial acquaintance, intensely patriotic, a noncommissioned officer by his own merit—is markedly deficient mentally. A company commander, informed that what is popularly termed the "nut board" had discharged one of his sergeants, as having the mentality of a boy of but twelve years or under, indignantly declared that the man was the most valuable in his company. Cases of this general nature are not very rare. When one remembers his own childhood, and the intense interest in playing soldier and even in drilling, with a fair degree of accuracy, that it involved, one is tempted to suggest that a juvenile mentality may, after all, not be a valid reason for excluding men from the lower ranks. If practically these men make good

soldiers, that is the main point. For this reason, the very sensible rule has been made, that defectives having a mental rating of over twelve years, by a standard similar to that of Binet, may be retained.

Without reference to hysteria and without accepting anything approaching Christian Science, military as well as civil medical experience emphasizes the very real influence of psychic conditions over the physical. The rapidity of recovery, the yielding to given degrees of physical incapacity, even to infections, seem to depend quite closely upon the patient's volition.

One surgeon, in speaking of the high disease incidence, especially epidemics of exanthemata, in his cantonment, verified the observation repeatedly made in recent years as to the lower stamina of persons from the country districts. This conception is entirely at variance with opinions long held and fostered by school readers, but, is backed up by health statistics, in many instances. To a large degree, the particular susceptibility to infections by soldiers from the country is explained by the immunity—possibly without actual occurrence of detectable infection—acquired by residence in cities, but, this surgeon also emphasized the mental state of his rural troops and mentioned especially that one could scarcely ever get them to take a humorous view of anything or to show anything more than a logy indifference to events.

Observations on Rectal and Fractional Narcosis

By E. H. F. PIRKNER, A. M., M. D., New York City

[Concluded from May issue, page 369.]

How the Isopral Enema Acts

THE infusion of the 40 mils (1½ ozs.) of the compound isopral-liquid can be done in twenty minutes and should not require more than forty-five minutes. Of 15 patients, 2 felt the effect distinctly twenty-five minutes after the infusion was started, 2 after thirty minutes, 8 after thirty-five minutes, 1 after forty and 1 after sixty minutes. They said that they felt very sleepy and soon after fell soundly asleep.

One very large, powerful woman did not fall asleep forty-five minutes after injecting

75 mils of the compound isopral liquid (equal to 7.5 Grams, or 120 grains of the pure drug); which may have been caused by injecting too quickly (in fifteen minutes).

But, 12 drops of chloroform put her to sleep in seven more minutes, and it required only 2 drams (8 mils) of chloroform to keep her asleep for twelve minutes—in which time a retroglandular abscess of a mastitis was incised, thoroughly scraped, and packed.

One frail, delicate, and anemic woman of 27 years complained that she tasted the drug ten minutes after the rectal infusion

had been started, and fell asleep in thirty-five minutes. Another patient out of the 35 mentioned, tasted the isopral eight minutes after infusion began and said that she began to feel drowsy.

In case No. 16, I gave 12 grains of isopral, in tablets, by mouth, and began to inject rectally 33 mils of the solution twenty minutes later. It took fifty minutes altogether to put her asleep after she had received 4.5 plus 3 1.5 Grams (equal to 64 grains) of isopral.

All the patients remained soundly asleep from three to five hours, nothing disturbing the work, which is sufficient encouragement to employ this method for major operations.

In a child 4 years old (case 17), 30 mils of the solution produced deep narcosis and rendered a tracheotomy easy. Similar good results were obtained in cases of removal of adenoids (cases 18 and 19) of children 4 and 5 years old; one operation for mastoiditis (No. 20) following middle-ear disease, and one, in an 8-year old (No. 21), for congenital unilateral hernia. A man of 38 years (No. 22) received 75 mils (equal to 120 grains) of isopral solution for herniotomy inguinalis directa (Bassini), this lasting one hour.

Case 23, one of a Douglas' abscess, broad incision through the posterior vaginal wall, dilating the incision with an especially constructed dilator and effecting drainage, progressed without difficulty under 60 mils of the isopral solution administered by rectum. Case 24, one of two submucous uterine myomata about walnut-size, enucleated after splitting the cervix and uterus in the anterior median line, required one slow infusion (forty minutes) of 60 mils of the isopral solution. Cases 25 to 36—curettage of the uterus—received from 4 to 5 Grams of isopral by the rectal method. Both went to sleep in about thirty-five minutes, with an average time of operating of seven minutes.

All these cases were done in the morning at my office and the patients were sent to their respective homes in the evening, without making any complications whatever.

One woman, not in this series, 25 years old, in general good condition, received an overdose of the narcotic, 80 mils of the solution being injected thirty minutes after a cleansing enema. Her condition (bartholinitis dextra, large abscess) was so painful

that I considered the large dose indicated. Her pulse was ordinarily 78 and of good quality. At 8:45 a. m., infusion was begun, and at 9 the pulse rose to 114. At 9:15, she was in deep coma, but, I continued operating and finished in forty minutes. The cyst was completely excised. However, operation was not begun before 10 a. m., as the patient appeared to remain in a condition to cause us anxiety. Her breathing was 30 per minute, labored and stertorous, although regular; the pulse maintained a regular rate of 110, of good quality, but bounding. The pupils were at maximal contraction and did not react to light, the conjunctival and corneal reflexes were extinct. The operation was performed between 10 to 10:30 o'clock. At 11:20, a hypodermic injection of 1-30 grain of strychnine improved the respiration; the rate being 26 at 12 noon. At 11:35, the pupils showed maximal dilation; no reflexes had returned. At 12 o'clock, the pupils were of average dilation and reacted to light, the pulse stood at 78, and the patient began to take notice. After that, we let her sleep for five more hours.

To contrast, I present an average case. The patient, a delicate woman of dark complexion, age 27, 120 pounds, anemic, was put to sleep for a bimanual examination, this revealing a left ovarian cyst the size of a small apple, apparently benign. At 11 a. m. (rectum prepared twenty-four hours before), she received 45 mils of the compound isopral solution, given per rectum. At 11:05, pulse 90, good quality. At 11:08, drowsy and at 11:35, asleep. At 11:45, pulse 72, respiration 12; pupils medium size, corneal reflexes extinct, conjunctival reflexes present. At 1:15 p. m., pupils of maximal contraction, no pupillary reflex, but, slow conjunctival reflex upon touching the eyelid; no corneal reflex. At 2:30, patient distinguished white from red; all reflexes had returned; was sleepy. At 3 p. m., pulse 72, facial expression stultified, patient tried to sit up, but, fell back on the pillow. At 4 p. m., patient got up and walked. At 5 p. m., she received some hot malted milk and retained it. At 6 p. m., she took tea and toast, which she relished. The next day at 9 a. m., she took breakfast, with great appetite; had no complaints, no headache.

Of all of the 37 cases previously described, only one, an anemic woman who

had been suffering for several weeks from secondary hemorrhages after abortion, complained the day after curettage of headache and feeling somewhat weak, but, this passed off and she made an uneventful recovery within four days. She had received 4 Grams of isopral. The operation was done in her home.

Fractional Narcosis

When my clinical observations with chemicals designed to accelerate general anesthesia were in an experimental stage, I combined isopral or barbital-sodium given by mouth with hypodermic injections of morphine and inhalation of chloroform, and, later, isopral per rectum, with morphine hypodermically and chloroform by inhalation; giving each drug separately time to take effect and to observe the symptoms. On an average it required one hour for anesthesia to take place and before beginning to operate. I call this fractional narcosis. Comparing these experiments with the cases in which pure isopral solution was used per rectum, it was found that the effect was noticed and narcosis became complete sooner; however, the administration of the chloroform had to be continued most carefully by an expert.

In 30 cases of curettage, 20 of which combined a plastic operation for relaxed outlet, cystocele or lacerated cervix, I followed 3 Grams of isopral in solution, per rectum, in 25 minutes, with a few drops of chloroform to effect, and operated, with the consumption of 7 mils of chloroform by inhalation. (1)

4 Grams of isopral in solution, combined with 9 mils of chloroform to effect in forty-two minutes. (2)

4.5 Grams of isopral in solution with 9 mils of chloroform to effect in forty-five minutes. (3) (That time some solution was lost for the reason that our technic was imperfect).

Hypodermic of morphine, 1-4 grain; hyoscyamine, 1-100 grain. Twenty minutes later, rectal infusion of 2 1-2 Grams of isopral, injected in ten minutes. Having lost some rectal infusion liquid, twenty-five minutes later, 150 drops of chloroform were administered. (4)

Isopral, 3 Grams in solution per rectum, adding, five minutes later, 3-16 grain of morphine per rectum. Asleep after ten minutes. Began operating one hour later,

when chloroform was used to maintain narcosis. (5)

3-8 grain of morphine, hypodermically. Twenty minutes later, chloroform, 12 mils. (6)

3-8 grain of morphine, 1-150 grain; of atropine hypodermically 1-2 ampule equal to 3 drams of chloroform. (7)

Hyoscyamine hydrobromide, 1-150 grain; morphine hydrobromide, 3-8 grain, intragluteally. Chloroform, 18 mils. Dilatation and curettage of cervix consumed altogether twenty minutes. (8)

Morphine, hypodermically, 3-8 grain. Twelve minutes later, chloroform, 8 mils. Complete anesthesia in thirty-six minutes. (9)

Case 10 of this series, twenty minutes after a hypodermic of morphine, 1-2 grain, received 15 mils of chloroform. Went to sleep in thirty minutes. Kept under it twenty minutes more.

In cases 11 to 16, I gave hypodermic injections of morphine hydrobromide, 1-4 grain; hyoscyamine hydrobromide, 1-100 grain, fifteen minutes before starting chloroform, of which were used 8, 10, 10, 18, 20, and 9 mils respectively. Complete anesthesia took place in 38, 16, 25, 30, 18, and 23 minutes, respectively.

In cases 17, 18, and 19, hypodermic injection of morphine, 1-4 grain, and atropine, 1-50 grain, required 12 mils, 15 mils and 15 mils of chloroform for complete anesthesia to take place in thirteen, twenty, and twenty-two minutes, respectively.

One patient (20) received morphine sulphate, 1-4 grain hypodermically; barbital-sodium, 5 grains in divided doses; injections given at 10-minute intervals. Was finally put to sleep, within thirty minutes, with one dose of 150 drops (about 2 1-2 drams) of chloroform. (20)

Another patient slept for one hour from a rectal infusion of barbital-sodium, 10 grains, in a 2-dram solution, and 1 dram of chloroform. Effect in fifteen minutes. (21)

7 1-2 grains of barbital-sodium in divided doses, injected hypodermically, adding 17 mils of chloroform, gave twenty-two minutes of deep anesthesia (case 22); while 5 grains of barbital-sodium, hypodermically, called for 9 mils of chloroform for anesthesia. This is the only case (23) in which vomiting interrupted the narcosis, lasting three minutes. In all the other cases,

neither retching nor vomiting disturbed favorable progress.

An alcoholic received morphine, 1-4 grain, hyoscyamine, 1-100 grain, hypodermically, and 22 mils of chloroform, and went to sleep in twenty-five minutes, but, caused disturbance. (28)

The very first patient (case 24, January 24, 1909) to whom I gave isopral, 40 grains by mouth, vomited the entire dose and had to be chloroformed. Another patient (25) retained 2 10-grain tablets of isopral and was put to sleep, without vomiting, half an hour later, with 14 mils of chloroform. Of course, the dose had been much too small.

That there can be little danger of intoxication from an overdose, appears from the case of E. T. (bartholinitis) previously mentioned, and again from the following cases: (26) Mrs. H., age 28, stout, mentally deficient, received first 2 Grams of isopral in solution per rectum, equal to 32 grains; morphine, 1-8 grain; and hyoscyamine, 1-100 grain, hypodermically; and 3 drams of chloroform. She fell asleep in twelve minutes, with no untoward after effects.

A woman, G., age 24, received 5 Grams (80 grains) of isopral in solution per rectum; fifteen minutes later, 1-2 grain of morphine sulphate, hypodermically, and, twenty-five minutes after the rectal infusion, 5 mils of chloroform. Curettage took only seven minutes. She slept three hours (27).

Even a combination of morphine, 3-8 grain hypodermically, as a preliminary to 40 mils isopral solution per rectum, left no

untoward effects (29). Another patient (30) went asleep thirty minutes after receiving 50 mils solutions of isopral per rectum, with an addition of 18 mils of chloroform; for which she asked because she "had had it once before."

In conclusion, any means to cause narcosis to enter more speedily, to render it more complete in a short time, consuming a smaller quantity of the drug and rendering it less disagreeable for the patient and safer than was the rule, must be seriously considered, thoroughly studied, and put into practice at once.

Among the drugs available, I have given particular attention to the modern hypnotics and selected from them those which seem the safest for the patient and can be administered under my own direction without requiring an expert assistant. Those which are devoid of a depressing influence upon the innervation of the heart are: isopral, barbital-sodium, and chloretone. Experiments with the latter I have only just begun.

The great advantage, that the patient need not inhale anything, saves him the fear and fright of the narcosis. There is no vomiting and, therefore, less danger of interruption. It requires no trained anesthetist. There are no after-effects, which is of special advantage after a herniotomy or other abdominal operations. For operations about the head and face, this rectal anesthesia is the ideal method. The patient need not be starved before the operation and even may gratify a good appetite on the morning of the ordeal.

Enuresis: A Few Simple Methods of Treatment

By SIMON L. KATZOFF, M. D., LL. B., Bridgeport, Connecticut

ENURESIS is a condition in which the urine is passed involuntarily or unconsciously; it is considered, not so much a disease, as a symptom common to many diseases and disorders; it is a frequent and troublesome affection of children, depending upon causes often difficult to detect.

Enuresis may consist of partial or complete loss of power to retain the urine. The most common form is, wetting the bed during sleep; in rare cases, the child may

have an almost incessant urging to pass water, which, if not responded to, results in a painless involuntary discharge. The affection is most common in children between three or four and fourteen to sixteen years of age.

Dr. Charles Goodwin Jennings divides the nervous mechanism of micturition into three parts, as follows:

1. The spinal center in the gray substance of the third, fourth, and fifth sacral

segments; sympathetic centers, which are cell-complexes inserted in the hypogastric plexus; and cortical and subcortical cerebral centers, which communicate with the spinal centers through fibers in the antero-lateral columns of the cord.

2. The efferent limb of the reflexes, consisting of sensory fibers distributed to the bladder-wall, which enter the cord with the posterior roots of the second, third, and fourth sacral segments.

3. The efferent limb of the yellow arc, carrying motor fibers to the sphincter vesicæ and destrutor urinæ, which reach the bladder by the pudendal nerve and the inferior hypogastric plexus.

In infancy, urination is purely a reflex act. The urine is retained in the bladder by the tone of the elastic tissues surrounding the neck of the bladder and the urethra and by the tonic contraction of the vesical sphincter. At about the end of the second year, the spinal reflex mechanism comes under the control of the cerebral centers, and within certain limits the urine is retained or the bladder emptied at will.

After the third year, inability to control the discharge of the reflex spinal mechanism of micturition, under ordinary conditions, constitutes enuresis. During sleep, cerebral control is lessened, and it is at this time that causes exciting reflex discharge are most active.

The Many Causes of Enuresis

Nocturnal enuresis is the most common form of the disorder. Constant enuresis, diurnal as well as nocturnal, is frequent. This form may be due to mental enfeeblement or to some serious disease of the central nervous system. Spina bifida occulta is an occasional cause and is incurable. Epilepsy as a cause of nocturnal incontinence should be kept in mind. When it is impossible to ascribe to enuresis an adequate cause, the condition is considered as a neurosis.

It must not be forgotten that, while in some cases the irritating pathological condition is manifest and would excite an enuresis in a normal child, in most cases the exciting cause is trivial, and the important factor in the condition is, the underlying nervous instability of the child, which may be inherited or acquired.

The causes of incontinence are many and peculiar: anything which increases the ir-

ritability of the spinal center, or which interferes with the cerebral control over this center; or anything which increases the irritability of the terminal filaments of the vesical nerves or of those in the neighborhood. The cause, therefore, may be in the central nervous system, in the urine, in the bladder or in any of the adjacent organs.

The causes relating to the central nervous system may be: anemia, malnutrition, an inherited nervous constitution or neurasthenia, the result of the child's surroundings. In such cases, it is often associated with chorea, locomotor ataxia, epilepsy, hysteria, shock or neuralgia.

Vesical irritability may be caused by polyuria, hyperacidity or alkalinity of the urine, and bacteriuria. A careful analysis of the urine, chemical and microscopic, therefore, is very important. A hyperacidity, a few cells or an excess of epithelium, indicating a mild vesical catarrh or infection with the colon-bacillus, may be the exciting cause of an enuresis.

In the bladder itself, we have cystitis and vesical calculus to look for, also malformations, muscular spasms of the destrutor urinæ muscle, stones, and tumors.

Local irritation in the adjacent organs may be due to adherent prepuce, balanitis, phimosis or a narrow meatus. Stricture of the urethra and an enlarged prostate in advanced age may bring about enuresis.

We should like to feel that in the foregoing we had mentioned all the causes of this trouble, but, the list is not yet exhausted; for, there still have to be considered a few more indirect or remote causes, at least in the domain of rectal irritation including pinworms, anal fissure and rectal polypus and that of vaginal irritation based upon vulvovaginitis or an adherent clitoris; these though being only rarely the cause.

Among the diseases of remote organs producing enuresis the following may be mentioned: adenoids, hypertrophied tonsils, thyroid insufficiency, chronic gastric and intestinal indigestion, and diabetes mellitus and insipidus.

The Prognosis

As to the prognosis, we may briefly say that the condition usually is hopeless when it depends upon organic disease of the brain and cord, also when owing to mal-

formation, unless these are amenable to surgical treatment. My own experience with many cases of enuresis in children justifies the statement that almost all cases due to functional or nervous disturbances (not organic) can be and are being cured. It is only a question of reasonable time, varying according to the age of the child, the duration of the symptoms, and the nature of the exciting cause.

Full ninety-five percent or more of cases of enuresis due to functional disturbances can, positively, be cured. Not only can the trouble be cured, it is being cured every day. But, mark well, seldom can a child be cured of enuresis by merely giving the parent or guardian a prescription and giving two or three slipshod rules.

Management of the Condition

It is, of course, understood that the cause or apparent cause, when known, is to be removed, if possible. The general condition of the patient must be considered. After ascertaining the past and present physical and mental history of the patient and after making an exhaustive physical survey of the patient, if we find our patient a fit subject, we may proceed with the various methods of treatment.

These patients generally are taken "by the case." The parent is honestly told the approximate length of time it may take to cure the child—say, from thirty to sixty days, on an average—the doctor to be paid down a reasonable sum (unless the patient is poor), perhaps one-half the amount agreed upon, so as to make sure that the patient will come for treatments and advice and examinations as often as necessary. That, and that only, will make the parents have patience and "stick" and to afford themselves a maximum opportunity for seeing a cure effected.

My experience in this field, as well as in curing piles (without the knife), has been that patients will stop treatment just as soon as they get temporary relief. Soon after, though, they will return complaining and telling why they were not impressed with the severity of the condition and why they did not hold out until they were permanently well. Unless this method is adopted (which is the best for doctor and for patient), I can not see how it will be possible to cure these patients. So, first and foremost, the patients, or their parents, must definitely decide to "want to really

get well," to follow directions and specific details from A to Z, and to show their faith and their willingness to proceed by paying a lump sum in advance, as suggested.

Some Specific Measures

The direct treatment consists of hygienic, dietetic, psychic, hydrotherapeutic, and medicinal measures. There is no harm in raising the foot of the bed, so that the urine does not rest on the base of the bladder. Some recommend electricity—the faradic current—one electrode in the rectum, the other on the perineum. A cold spinal douche, with a brisk rub, may be given in some cases. Also, the rectum may be unloaded by means of a warm oil enema. The child should evacuate the bladder just before retiring, and may be awakened late in the evening, for the same purpose. Some mechanical device designed to prevent the child from lying on the back has occasionally been successful. Various electrical devices have been employed and sometimes proved beneficial or resulted in a cure. The urethral cooling sound or psychrophore of Winternitz has been in use for curing nocturnal enuresis.

Every effort should be made to give these children quiet, invigorating surroundings. The nervous tension of school-life should be relieved or ameliorated and all exciting occupations and amusements forbidden. Restriction of fluids ingested in the latter part of the day has a good effect. Early hours and plenty of sleep must be insisted upon. Certain articles of diet are to be avoided, and coffee, tea, and beer should be very sparingly allowed or not at all. Meats may be eaten in moderation. The diet which succeeds best is a simple one composed of milk, vegetables, fruits, cereals and meats. The child should be taught to hold its water as long as possible during the day in order to accustom the bladder to full distention.

Measures directed toward improving the general muscular and nervous tone are of great importance, and they are required in most instances. Anemia, chlorosis, malnutrition, indigestion, and constipation should each receive careful attention. Any local condition, such as adenoid growths of the pharynx, which might serve to increase the general nervous irritability, should be removed.

The moral treatment here is important. One should work upon the child's pride and

use every possible means to strengthen the will-power. Infliction of punishment, whether corporal or otherwise, does little good, and with most children even is absolutely harmful. With children in whom incontinence is chiefly a matter of habit, the offering of a reward will prove a very efficacious means of treatment.

If there is reason to suspect a contracted bladder, a cure may sometimes be accomplished by daily distending the organ, up to its normal capacity, with warm water.

In locomotor ataxia, myelitis, and paralysis, the bladder should be emptied four times in twenty-four hours, and should be washed with a silver solution or other such preparation; sometimes a urinal must be worn. In most of these organic diseases, all our efforts for a cure prove unsuccessful; the best we can do, most of the time, is to give relief.

Useful Drugs

I certainly do believe in the careful and intelligent administration of medicines for curing functional enuresis; it has helped very materially in my own hands. It is only the abuse that harms, as in everything else. Among the medicinal agents, the most reliable ones are, atropine sulphate, *thuja*, *rhus aromatica*, and *equisetum*. One little tablet put up by the Abbott Laboratories (and worth its weight in radium), is composed of the following ingredients and has worked wonders: atropine sulphate, gr. 1-1500; strychnine sulphate, gr. 1-1000, sodium cantharidate, gr. 1-5000; *santonin*, gr. 1-50; one such to be taken hourly for three or four doses, before bed-time. Another little tablet, composed of *rhus aromatica*, *equisetum*, and *belladonna*, also has worked wonders; of course, always in conjunction with other indicated remedies, according to the conditions present.

One other cardinal principle not to be overlooked is, that the child should eat no starchy food or, when necessary, but very little of it. I have had cases where nothing really helped until bread, potatoes, biscuits, cabbage, and the like were entirely excluded from the diet.

Ergot sometimes is useful, but is not so efficacious as *thuja*, atropine or *rhus aromatica*. Personally, I never use it. Atro-

pine always should be preferred to *belladonna*, although the latter may be given, and, then, perhaps, in a vehicle such as elixir of buchu or santal, with from 2 to 10 grains of potassium acetate—which acts to allay irritability of the mucous membrane of the bladder. Tincture of *hyoscyamus* may replace the *belladonna* when there is infection along the urinary tract. Tincture of *nux vomica* or strychnine sulphate generally is indicated in all cases in which atony of the sphincter muscle is a factor in enuresis. *Thalocal*, *gelsemine*, and *arbutin* are very helpful at times.

Freyberger recommends fluid extract of *rhus aromatica* very highly, in doses of from 5 to 10 minims to a child of five years, in cases that have resisted *belladonna*. Cathelin, in 1901, proposed epidural injections of saline solution for relieving enuresis. I do not indorse any such procedure. Tukey, Bernheim, Cullor, and other practitioners of hypnotic therapy urge the suggestive and hypnotic methods. I do not believe it advisable, in children, at least.

Other simple and worthy suggestions are as follows: (1) The tincture of *cantharides*, 1 to 2 drops three times a day. (2) *Parch*, grind, and boil common white beans, of which make a drink, to be used freely at meals, as one would drink coffee. (3) Lime-water or sodium bicarbonate, about 3 grains three or four times a day, with mild bitter tonics, such as a tea made of Peruvian bark, and so on, may be tried. (4) *Uva ursi* also has been recommended, as follows: Upon a handful of the leaves, pour half a pint of boiling water. Of the cold infusion, give half a teacupful three times a day; and for small children about half that quantity. (5) Another oldtime suggestion is, to dissolve one roll of gelatin in one pint of boiling water, strain, and add one pint of sweet milk; put this again on the fire and just let it boil up; then add some sugar and grated nutmeg. It may be diluted with water and taken in amounts of one-quarter to one-half tumblerful a day. This is supposed to be useful in an irritable condition of the bladder. Every reasonable suggestion toward curing this terrible disease, or symptom, should be encouraged.



After Thirty Years—II

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

EDITORIAL COMMENT.—Professor Rittenhouse's long experience as a physician and teacher, and his open-minded sympathetic nature have combined to give him an experience and a viewpoint making him an unusually fit counsellor and advisor of younger men. We anticipate much benefit from this series of articles which commenced in the April issue.

[Continued from the April issue, page 278.]

Settling Down to Practice.

WHEN the doctor has completed his medical course and obtained a license to practice, he finds himself confronted by several questions the decision of which can not be put off and whose right decision is so momentous to his future welfare that he can not afford to leave the matter to chance.

Where shall the aspiring embryo doctor locate? In a large city or in a country town or in a rural village? Shall he cultivate a general practice or become a specialist?

To the average graduate, the city looks like an attractive field. The city doctor escapes the long country rides over bad roads in storm and cold. The country doctor works hard for small fees, while he is cut off from many of the things that make life attractive to his city confrère. Then, also, the large fees gathered in by the city specialist present themselves as a tempting bait.

The result is, that the cities always are oversupplied with doctors. Of every graduating class, a considerably proportion plan to remain in the city. Some of these make of it a success, many more, though, eke out merely a scanty living, dragging along for years, on the shabby-genteel edge of poverty, their income being less than the wages of a good mechanic. From time to time, a few of these give up the disconcerting struggle and drift into some other occupation. A few of the wiser ones do what they should have done in the first place, namely, they go to some country town and there, as a rule, succeed.

It is a well-known fact that very few city doctors grow rich or even well-to-do. Those who do are chiefly specialists, who have been fortunate enough to surround themselves with a wealthy clientele, or who

have obtained wealth by marriage, inheritance or speculation.

The medical adviser of the great mass of the people is fortunate if he makes just a good living. There are so many clients who can not or will not pay that the nominal fee is heavily discounted when it comes to making collections. The country doctor, as a rule, can collect a larger proportion of his bills than can his city brother; although in some localities he can make the bulk of his collections only once a year—when the farmer sells his crops. In some communities, he has to take a part of his pay in farm produce. This is not altogether a disadvantage, for, he gets a good part of his household supplies in better condition than does the city-dweller, who pays high prices for food of an inferior quality.

I am inclined to think that the doctor who is located in a town of from 5,000 to 15,000 inhabitants is in a position to get more out of life than his city brother. If he is surrounded by a prosperous farming community with good roads, I am sure of it.

If he decides to locate in the city, the question is again, Where? Shall he pick out a fine residence district and work for a high-class clientele? Shall he select a middle-class neighborhood and do general family work? Shall he locate in some district where the foreigners swarm and most of them are poor? Shall he devote himself to a specialty from the beginning? Shall he lay his wires from the first to become a great surgeon—that iridescent dream of so many? Shall he have a downtown office? Shall he keep an automobile? Shall he teach in medical college?

Truly, a list of questions sufficient to furnish food for thought. If he settles in a wealthy neighborhood, he must have capi-

tal enough to put up a good front and appear prosperous for two or three years, for, among this class of people patients come slowly. Most of them have a family physician, are slow to change, and when they do change they want a doctor who appears to be in their own class. Doctors who practice in what seem like wealthy neighborhoods tell me that they meet a good many people who are living beyond their means and putting on so much style that they have no money to pay their bills.

My own observation is, that deadbeats are plentiful among all classes. Probably, all things considered, the middle classes, consisting of mechanics and salaried people, are the most satisfactory as patients. The poor and the foreign population offer a field in which a practice can be worked up more quickly than anywhere else, but, much of it will be charity work, done under unpleasant and unfavorable conditions. Among the foreign populations, certain nationalities are noted for their thrift, and these make good patients, for, they generally pay cash if the doctor will make his fees moderate.

In deciding on a location, the questions that arise are numerous and perplexing, still, there are certain general principles that are pretty well settled and which may help the young doctor in coming to a decision. Of course, personal tastes and inclinations must play a large part in any decision. So must personal qualities, whether inherited or acquired. Every graduating class contains some men who would be failures in city practice, as well as some others who could not adjust themselves to the people and customs of a farming community.

One fact that stands out plainly and is easily recognized is this: *In every large city, a considerable number of doctors are struggling along on the ragged edge of poverty.* Many of them are men of decided ability, capable of doing first-rate work, but, they lack some of the qualities necessary to win and hold patients. And the pity of it is that they could acquire those qualities if they would but give the matter sufficient thought.

The Need of Publicity.

A doctor must advertise—not, indeed, in the same way that the merchant does, but, in some way he must let the public know

that he exists and is ready for his share of the world's work. He may not advertise commercially; not because the code of ethics forbids, but, because good taste and common sense forbid. The code of ethics simply formulates the rules that apply to the situation, as dictated by good taste and common sense.

How, then, may the doctor bring himself before the public? What can he legitimately do to remind the people that he is in the field? A great deal. The shyness that prevents them from making new acquaintances must be overcome. *Acquaintanceship is a doctors' capital.* The more people he knows, the better his chance of being called by one of them. The most unlikely person may turn out to become a client.

In my first year of practice, I happened to win the good will of a German washerwoman who seemed about as unlikely to prove a valuable friend as could well be imagined. She was too homely for words to tell, with a big mole on her cheek, a moustache like a grenadier, and two tombstone teeth in front that did not meet. She spoke a mixture of German and English that would have made a fortune in vaudeville. She was so crosseyed that when she wept the tears must have run down her back. Yet, this kindly old soul sent me patient after patient and they in turn sent me others until I could have constructed quite a genealogical tree of the clients whom I owed directly or indirectly to this time-scarred veteran of the wash-tub.

A doctor, then, should try to know as many people as possible. He must study every means of getting acquainted, and when he has made a new acquaintance he must see to it that he does not forget him. *People like to be remembered, especially by name.* It is no use to say, "I can not remember people's names". One can learn to remember. Many persons are careless when meeting anyone for the first time. Even if introduced, they forget the name the next minute. This habit can easily be replaced by the one of training the memory to remember names. Associate every new name with some known name or incident or personal characteristic. I have found it a great help to enter a new name, at the earliest opportunity, in a special place in my pocket-memorandum,

with a word or two of identification. I also have an arrangement in the card-index of patients, which stands on my desk, that nearly always will enable me to recall a patient's name. A little ingenuity will enable anyone to devise means of bringing into line a treacherous memory. It is an excellent investment of a little time and pains and will pay good dividends.

Value of Society Membership

I am often asked by prospective doctors as to the value of membership in clubs, lodges, churches, and other societies. Do they help the young doctor to build up a practice? That will depend largely upon the man himself. These gatherings furnish him with an excellent opportunity: it is up to him to use it wisely. We have all heard the timehonored joke of the doctor who gets himself called out of church as an advertising trick. The honest mind revolts at the idea of commercializing church-membership in such a manner. There is, of course, no reason why a doctor should not be a regular attendant at church, nor any reason why he should not benefit by the acquaintanceship the church affords. It is only the bald abuse of the opportunity that is wrong. The public are not all fools; they are quick to detect insincerity; and the doctor who thinks he can use the church for a stalking-horse without people seeing through his motives is very dull-witted.

Membership in clubs, lodges, and the like is always valuable in so far as it adds to ones' list of acquaintances. It will not do to expect results too soon, however. The doctor who joins a club or a lodge and then expects that in a short time a large proportion of the members will employ him professionally needs to have his bump of vanity pared down a bit, like a troublesome corn. If he joins such a society for a legitimate purpose and then takes ahold of its affairs to help make it a success, he will get a sort of advertising that is perfectly legitimate and which grows more valuable as time goes on. He is on trial, in a sense, and if he makes a good impression he will ultimately get business. But, the moment he lets it be seen that his chief object is, to extend his practice, he defeats that very object.

I belong to a club which has among its members a certain doctor who is always

talking of the number of operations he has performed and the number of patients he has seen. He has become a standing joke. Club-members occasionally have a bit of quiet fun by drawing him out and encouraging him to outdo himself. He certainly is not doing good advertising.

When I joined this club, it was for the sake of its social and recreative features. If it brought me business, well and good; if it did not, it still was worth all it cost as a means of recreation. I was a member several years before I got a patient out of it. Finally here and there a member would consult me professionally, until in time the club became a good source of business. As said, one must not expect results too soon. I have known men to join this club and then, after a few months, resign, because they had got no business out of it. They had the wrong point of view; in other words, they had an exaggerated sense of their own importance.

I would say, then, to the young doctor: You *must* get acquaintances, but, those acquaintances are under no obligation to become your patients. *You* are on trial. If you can inspire your acquaintances with the idea that you are the right kind of a man, they may conclude that you could be the right kind of doctor.

After all, personality in a doctor goes a long way, much further than most people imagine. Has he the characteristics that will make people like him? If so, they will trust him as a doctor. I have often known men whose skill was not of the highest enjoying a large practice, chiefly because they were likable. They were kindly, sympathetic, sincere, good companions, and good friends. The layman looking for a family physician is likely to be attracted by such a man even though his professional skill may not be of the highest. After all, the layman has little means of judging a doctor's skill. If the doctor has good, practical, common sense, the layman is likely to observe that fact and then take the rest for granted.

On Dispensing Medicines.

Shall the doctor dispense his own medicines? Yes! By all means, yes, except in certain special circumstances where it may be inadvisable. For example, it sometimes happens that a doctor is located in close proximity to a drugstore or in other

ways in intimate relations with the druggist, so that a large proportion of his patients are sent to him by the druggist. In such a case, the doctor could not honorably dispense medicines to patients who came to him through the druggist. If he did, the patients would not be sent to him very long. Other special conditions may, in certain cases, make it advisable for the doctor to write prescriptions.

In general, however, it seems to me that the advantages of a doctor doing the most of his own dispensing are so great and so obvious that there is little room for argument. Especially is this true today more than ever before, because manufacturing pharmacy has placed at our disposal the very great convenience of alkaloids and other preparations in tablet or granule form, thus making it possible for the doctor to do his dispensing at a very small expense of time, and also enabling him to attain an accuracy of dosage which is not attainable by the bottle-and-spoon method. These two considerations alone, namely, economy of time and accuracy of dose outweigh almost every other consideration.

This question of dispensing is a momentous one, and it seems to me that it is growing in importance every day. My own observation and experience have forced upon me the conviction that the average drugstore in the city of Chicago is deteriorating and that the doctor, in writing a prescription to be filled at the nearest drugstore, takes considerable risk of getting unsatisfactory results, from lack of quality in the drugs or lack of reliability in their compounding. I should be the last person in the world to do an injustice to the competent and reliable pharmacist, and I am glad to admit that I know many such. I am simply stating regretfully what I believe to be a fact, namely, that the *proportion* of reliable druggists is on the decrease, at least in this city. We may recommend a reliable druggist to the patient, but, we can not compel him to follow our advice.

Among the advantages of handling one's own medicines, I want to put emphasis upon the following:

1. Reliability and quality. The doctor can buy his supplies from wholesalers whose name is a guaranty that the quality is first-class.

2. Economy to the patient. Even if the doctor makes a small charge, to cover ex-

pensive medicines, it still is so much less than prescription prices that the patient is relieved of a heavy burden. Prescription prices are rich people's prices; the common man can not afford them.

3. It holds the patient to the doctor. When his medicine is used up, he comes back to the doctor, instead of getting a "refill" for himself and perhaps for his friends. A request to refuse refills and copies of prescriptions is a dead letter with most druggists. I once traced one prescription that had been refilled twelve times for the benefit of a whole neighborhood. I had received a dollar for it.

4. In the treatment of venereal disease, especially, it is an absolute necessity to bind the patient closely, by giving him at each visit only just enough medicine to last him until he ought to come again. With most of these patients, this is the only way to get satisfactory results, either therapeutically or financially.

5. Most doctors have favorite prescriptions. The only way to get proper success out of these is, to dispense them one's self. For example, Baer's sedative (valerian, sumbul, and asafetida) has been a money-maker for me. It would never have been so if I had written prescriptions for it. It is not a secret remedy, but, each patient tells her friends what it has done for her and then they come to me. I get a legitimate reward for having observed and worked out a certain line of treatment.

6. It promotes simplicity of prescribing. It tends to relegate to the background the old-fashioned "shotgun" formulas of from six to twelve ingredients. In this way, it promotes more accurate therapeutics, for, when we use but one or two drugs at a time, we are not so much in doubt which one produced the desired effect. Not only do we tend to use fewer drugs at one time, but, fewer altogether. Most doctors would learn with surprise how brief a list of drugs would suffice for most of the diseases we meet. For many years, I have carried a pocket-case with vials for twelve kinds of tablets or granules, and I have been surprised, myself, to see how seldom I need to go outside of this list.

The organized druggists of the United States have made attempts, and probably will make others, to get state legislation to prevent doctors from dispensing their own

medicines. It would be difficult to conceive of a more flagrant violation of the rights of the individual than this—the rights of the layman as well as those of the physician. It behooves the profession to be watchful. The arguments used to achieve this purpose are absurd in their speciousness and falsity, and, yet, they can be made to sound very plausible in the ears of the average legislator, who has too little direct acquaintance with the matter to reason judiciously.

The danger is all the greater because of the indifference of a part of the medical profession, namely, the specialists in the downtown offices. They have no particular objection to depending upon the prescription-druggist, because they are fairly certain that their prescriptions will go to reliable druggists and because they do not need to consider the question of expense

to the patient. These two considerations bear heavily upon the general practitioner. He must have his prescriptions filled reliably, and, yet, he has little control over the matter of where they shall be filled. His patients can not afford to pay fancy prices for their medicines.

Take for example a case of pneumonia. The medicine must be absolutely reliable in quality or else the patient's safety is jeopardized. The drug bill, if the case is managed by prescription, will be so considerable as to tax the patient's resources very heavily, and to that extent prevent the doctor from getting adequate remuneration for his work. I have many an account on my ledgers today that was never paid, because the drug bill took all the patient had.

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[*To be continued.*]

The Treatment of Chronic Diseases

Diseases of the Nervous System

By GEORGE F. BUTLER, A. M., M. D., Kramer, Indiana

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DISEASES of the nervous system are usually divided, for clinical purposes, into (1) diseases of the brain, (2) diseases of the spinal cord, and (3) diseases of the peripheral nerves, with (4) a final separate compartment for the group known as functional nervous diseases. And it may be remarked, in passing, that this kind of classification, like most classifications "for clinical convenience", is, really, anything but a convenience, while it is responsible for a large part of the confusion and, hence, the nihilism that attends the therapeutics of the subject.

As soon as men begin to think about pathologic conditions in terms of disease-names, instead of disease-pictures, they immediately and unwittingly—no matter how carefully they believe themselves to be armed against it—begin to think and speak of their therapeutics in similar cut and dried fashion. And this speedily results in therapeutic nihilism, because it quickly becomes evident that drug-names and disease-names have no necessary or constant relation to each other.

The one and only adequate classification

for any group of body-diseases, for therapeutic purposes, is that which is based upon the physiologic process involved in the condition. The simpler and more proximate this conception of disease is kept, the simpler and more proximate will be the conception of the therapy it calls for; and, contrariwise, the more the one is befogged by artificial considerations of topography and nomenclature, the more remote the other will become.

There is no medicine that acts specifically upon the head or the back or the limbs; nor is there any that is specifically adapted to measles or pneumonia or meningitis, as entities. But, there are remedies which, in virtue of their influence upon physiological processes, affect certain tissues (the word is used in its broad sense) and functions: and it is by a proper utilization of this influence upon such tissues and functions that we bring about therapeutic results.

Plainly, then, the therapeutic classification of disease-forms must rest upon the tissue changes and functional derangements which characterize disease-condi-

tions—and which are not necessarily constant for any “named” disease.

Rational Classification of Nervous Diseases.

Upon these premises, there can be but three classes of nervous disease; namely:

- (1) Inflammatory. (2) Degenerative.
- (3) Functional.

By *the first* term are meant those diseases of the nerve-tracts which depend upon the train of pathologic processes pertaining to inflammation, including exudation, infiltration, pressure-necrosis, and the rest of the sequels. By *the second*, those in which the essential morbid element is a hyperplasia of the interstitial nerve-tissue or its replacement by connective tissue. By *the third*, that group of nervous troubles in which no gross organic lesions are discernible, but, which, *apparently*, depend sheerly upon a functional disturbance, either in the neurons themselves or in the vasomotor mechanism associated with them.

To the foregoing rational classification, I invite the attention of those who may read this article. Out of a decent regard, however, for conventionalities, the usual order will be observed in treating of the members of these disease-groups; namely: diseases of the brain, of the cord, and of the peripheral nerves, in the sequence named. Which, be it understood, is merely a matter of itemized order, and, in no sense, of classification.

It would seem to be an axiomatic proposition that, inasmuch as the physiologic pathology in diseases of the nervous system is fundamentally the same as in diseases of other regions, their therapeutics ought, at least, to be just as potential.

By the same token, the therapeutic principles that apply to the one ought to apply to the other.

True, there are certain elements appertaining to the anatomy and physiology of the nervous system that modify these two propositions. That is true in comparing any of the tissues or organs of the body. But, they are merely incidental considerations and do not affect the true therapeutic coefficient. And one of the things that have played havoc with neurologic therapeutics is the fact that we have paid too much attention to these special considerations and too little to the simple underlying

ing physiology of the matter. Let me illustrate.

One of the prominent, constant accompaniments of inflammation is pain. In meningitis, because of the peculiar relations of the special tissues involved, the pain mostly takes the form of headache and is exceptionally severe and constant. Now, in the case of, say, a visceral inflammation, we recognize the incidental nature of the pain, and, while we adopt reasonable means to keep it within tolerable bounds, we do not regard that as the prime objective of our treatment; above all, we recognize that opiates are antagonistic to our therapy of the underlying conditions of inflammation, hence, we employ them as little as possible. But, in the sense of meningitis, we have been so obsessed with the neurological conception that we have looked upon the pain as a basic element, and have directed our therapeutic agent (usually opium) to the relief of that, with some sort of idea that we were thereby getting at the root of the trouble, forgetting that in this way we were destroying, instead of assisting, whatever chance nature had of remedying the underlying congestion and exudation, of which pain is a manifestation.

Again: One of the common manifestations of functional derangement of an organ or tissue is a certain irritability, which displays itself in a spastic functionalization of that organ or tissue—as, diarrhea in functional intestinal troubles. Now, in ordinary cases, unless the irritability is excessive, we do not address our main therapeutic effort toward this incidental symptom. We adjust, with our remedy, the vasomotor mechanism or whatever may be at fault, and the spastic trouble rights itself.

But, in the case of nervous diseases, we have lost our sense of proportions. The “nervous” symptoms of these functional diseases are precisely analogous to the diarrhea in the bowel; they represent the way nerve-tissue has of manifesting irritability or exhaustion. Yet, so obsessed have we been with the neurological idea that we have regarded these symptoms as the disease itself and have been loading up our patients with bromides, *bromides*, BROMIDES, in the fond delusion that we were striking at the heart of the trouble. I dislike to speak ill of old and time-

honored servants, still, I am constrained to assert that the bromides have been the curse of neurologic therapeutics.

It is this obsession on the part of the neurologist which accounts for the frequent surprising spectacle of a general practitioner succeeding in a neurological case where a distinguished specialist has failed or has given up. The specialist, obsessed by the "special" aspects of the disease, has been thinking nothing but opiates and bromides; and he knows well the futility of such treatment. The general practitioner, with no such prejudices to blind him, has gone ahead with the remedies that the patient's condition seemed to call for and has won the case.

The fact is, as already intimated, *the pathology of the nervous system, so far as it relates to treatment, is precisely the same as that of diseases of the rest of the body*, calls for the same therapeutic principles, and yields proportionately the same results.

Inflammatory Diseases.

The inflammatory group of nervous diseases includes the following conditions: (1) Encephalitis. (2) Meningitis. (3) Myelitis. (4) Poliomyelitis. (5) Landry's paralysis. (6) Neuritis.

It will be noticed that the morbid physiology of all these diseases, as boiled down and set forth in this article, is essentially the same; and, further, that it is essentially the same as that of all other inflammatory diseases. Stasis, congestion, exudation, infiltration pressure-necrosis, and, if not relieved, interstitial hyperplasia—this is the history of every inflammatory process. And it is precisely this train of events with which we have to do in the case of the diseases of this group, in the nerve-tissues of brain, cord, and peripheral nerves.

The most elementary logic would instruct us that the rational therapy of such conditions should be precisely the same as that which our modern knowledge of pathology and therapeutics leads us to apply to similar conditions elsewhere. However, a glance down through the system of treatment laid down in current textbooks and magazine articles on neurology will demonstrate the need of reasserting this simple proposition.

What, for instance, is the approved treatment, as currently taught, for myeli-

titis? Opium, quinine, arsenic, strychnine, iodides! For myelitis, the formula varies like the Irishman's steak-and-potato dinner—it is "the same, barring the steak"; in other words, the quinine left out. For meningitis, we are told, "there is no drug that influences the course of the disease." Yet, the physiologic pathology of these diseases is the same as that of, let us say, appendicitis. Would any modern physician think of prescribing or recommending the above-named drugs for appendicitis; or expect to get any results, if he did so, beyond the analgesic effect of opium?—the opium justifiable as an expedient, useless as a curative remedy.

The rational basis of therapeutics in inflammatory conditions, as called for by the physiologic pathology, is, first, derivative, then absorptive, and always eliminative therapy; and inflammations of the nervous system offer no exception to the rule.

The secret of success in this treatment lies in using *drugs of definite dependable action* and pushing them boldly, albeit intelligently, *to effect*. So attacked, even the most formidable of the inflammatory nervous diseases, like those of other tissues, often yield with surprising and gratifying promptness, and leave the victory with the physician.

Encephalitis.

(*Cerebritis, Inflammation of the Brain*)

Treatment of encephalitis, in order to be availing, must be applied in the early stages, while the disease process still is one of active congestion, and must be directed toward the equalization of the disturbed circulation. In other words, the treatment of the early stage, both pharmacologically and physically, must be active derivative treatment of the most vigorous kind.

There is no class of diseases in which hydrotherapy has a more decided field of usefulness than in the acute inflammatory diseases of the nervous system; and in none of this class is it more emphatically indicated than in encephalitis. Cold to the head, in the form of ice-bags, or, better still, the cold-water-coil; heat to the extremities and the abdomen, in the shape of hot-water-bags or electric pads; hot enemas thrown high into the colon at intervals of five or six hours; and frequent bathing of the body in tepid water, followed by a

towel-rub; all these are potent and useful measures for equalizing the circulation and thus relieving the congested brain-tissues.

At the outset, a brisk purge should be given, consisting of calomel, phenolphthalein, and ipecac, in small repeated doses, followed in the morning by a laxative saline. This fulfils a threefold purpose: first, it empties and cleans out the intestinal tract; second, it acts as an intestinal disinfectant, preventing the reabsorption of septic matter by an already overburdened blood; and, third, it draws a considerable quantity of blood to the intestinal vessels and so helps to relieve the cerebral stasis.

Having started intestinal flushing and instituted hydrotherapeutic measures, no time should be lost in administering suitable remedies; and these should be pushed vigorously and fearlessly to their full effect, their action, however, being carefully watched by the physician, so that the physiologic limits shall not be overpassed. The timid therapist who is prepared to dole out his medicines only in complacent, "safe" doses might here just as well withhold his hand; for, if drugs are to do any good at all, they must be pushed to the very limit of safety. It is, in effect, a desperate battle, in which time is a determining factor.

The promptest and most certain relaxant of the entire vasomotor system is atropine, in minute doses (of 1-500 grain) repeated hourly until the face is flushed. (In larger doses, the effect of atropine is precisely the reverse.) And this may be given for the first twenty-four hours. However, it is unfitted for continued administration, because of its action in checking body-secretions. Following the atropine—and perhaps the best from the beginning in the majority of cases—veratrine and aconitine are the ideal dilators of the capillaries and slowers of the heart, whereby the cerebral circulation is depleted and the temperature reduced; and these drugs have the advantage that they both stimulate glandular secretion instead of locking it up. Veratrine, especially, is an ideal remedy in this stage of the disease. Rarely it may be advisable to add strychnine to the combination, and perhaps a little digitalis, where the general muscular

tone of the patient is low. Generally, however, these patients are sthenic types of individuals and require only the defervescing action of the veratrine and aconitine. And this is usually all the drug-treatment that is necessary during the first stage.

When the exudative stage sets in—as evidenced by the extreme rise in temperature, the slowing of the pulse, the stupor, and other compression-symptoms—the objective of treatment is, to drain, as rapidly as possible, the serous tissues of the brain. Ice-bags and water-coils must now be discarded, since we must depend upon the cerebral membranes to assist in their own drainage, and cold impedes their activity. Three channels of revulsion are open to us, namely, the bowels, the kidneys, and the skin, all of which must be called into requisition and stimulated by proper remedies to assist in the draining process.

A sharp, even drastic purgative should be given, such as elaterin or croton-oil, which will excite the bowels, not only to excretion, but, to vigorous secretion. Colchicum, in 5-drop doses of the tincture, is a powerful stimulant to elimination of fluids through the kidneys and skin; and it may be augmented by occasional doses of pilocarpine, 1-5 to 1-3 grain, provided there are no cardiac contraindications. In any case, if pilocarpine is given, the heart should be guarded meanwhile with sparteine and digitalis. I have found the old-fashioned apocynum, in the same dosage as recommended for colchicum, to be an excellent remedy in this stage of the disease—an invaluable adjunct to colchicum.

Encephalitis is usually a very acute affection, running its course either to death or to recovery in ten days or two weeks. Hence, the problem of feeding the patient is not a serious one, especially since these patients, as already stated, as a rule, are strong, hearty individuals, who are all the better for a temporary letup in their food. During the attack, it is best to feed them just as little as is consistent with the maintenance of reasonable strength, prescribing a general fever-diet. With the establishment of convalescence, a steadily increasing, plain, nourishing diet may be given, to make up for lost time.

[To be continued.]

What Others are Doing

THE NEWER WOUND TREATMENT.

Under the title of "The Newer Wound Treatment," Dr. Charles W. Delaney, surgeon to the Altoona Hospital, contributes an article to *The Medical Council* for April which is of special interest because of its bearing on industrial accident surgery. Of the newer antiseptic methods of wound treatment, he discusses the one elaborated by Doctor Dakin, the advantage of which is, that it is not complicated and entails but small expense.

The fundamental principles underlying the treatment in any of the antiseptic methods, Doctor Delaney points out, are essentially the same, and, unless the technic is closely observed, the treatment will be subject to failure. The prime requisite in the treatment of every wound is, absolutely perfect mechanical cleansing, removing the dead and devitalized tissue and foreign material. In a given case, it may be most expedient to excise the entire wound to a depth of one third to one-half of an inch, making a complete and thorough dissection of the parts. After the tissue is removed, free capillary oozing indicates that healthy tissue has been reached. Needless to say, a careful aseptic technic is called for in this operation. After the wound has been prepared in this manner, the field is thoroughly sprayed with a 20-percent solution of dichloramine-T dissolved in chlorinated eucalyptol, after which the wound may be sutured and the skin edges brought in apposition with little or no space for drainage.

The second rule required for perfect healing is, to insure absolute rest and immobilization. This expedient of nature, if carefully observed, probably is the greatest therapeutic means at hand in subduing infections and allaying inflammatory conditions, since it gives the natural defenders of the animal structures—the blood-serum and the leukocytes—an opportunity to assert themselves and protect the system

from bacterial invasion. While some surgeons assert that careful and perfect cleansing, and rest, even without the addition of antiseptics, is sufficient for healing, Dr. Delaney holds that the addition of dichloramine-T exerts a beneficial influence. However, it must be repeated that perfect technic in every step is stringently called for, else results will not be satisfactory.

The new method has been employed by Doctor Delaney in treating industrial wounds, for the past six months, with the result that, so far, no pus or infection was observed to develop in a single instance. Doctor Delaney considers dichloramine-T an exceedingly useful preparation for first-aid dressing in industrial establishments, insisting, however, that, to obtain the best results, early treatment is necessary, together with thorough wound cleansing and absolute rest.

It may be pointed out that, recently, a new and improved solvent for dichloramine-T has been put on the market which is superior to the chlorinated eucalyptol and contributes to even better results. This solvent is known as chlorcosane and was introduced by Doctors Dakin and Dunham. It dissolves about 8 per cent of dichloramine-T, while the ordinary germicidal strength required is but 5 per cent.

GENERAL ANALGESIA BY ORAL ADMINISTRATION

In *The British Medical Journal* for March 2, (cf. *Jour. A. M. M.* for April 6), Dr. James T. Gwathmey and Dr. Howard T. Karsner of the Medical Reserve Corps, U. S. Army, published a preliminary report on some investigations that possess large possibilities for practical use, the authors having attempted to induce general analgesia, rather than anesthesia, that might be applicable for short operations and for painful dressings.

In some experiments, on rabbits, with a variety of anesthetic agents, it was found that a 50-percent mixture of ether in olive-

oil gave the best analgesic results. In the rabbit's stomach, the olive-oil, though, gave rise to gastritis; so, while this oil is known to be practically nonirritant to the human stomach, it was thought that perhaps some mineral oil might possess even less danger of acting as irritants. Accordingly, a good quality of liquid paraffin was substituted, the most satisfactory combination being found to be a mixture of 4 fluidrams of ether, 4 fluidrams of liquid paraffin, and 5 minims of peppermint-water.

The disagreeable features as to taste and smell were overcome in the following manner: One ounce of port wine is placed in a glass and the analgesic mixture in another glass. The patient takes a mouthful of wine, holds it for about thirty seconds, rinsing the mouth so as to get the aroma in the upper air-passages and the taste well established, and then swallows the wine. The ether mixture is then taken and is followed immediately by the remainder of the wine. Several kinds of wine and liquor were tried, but, port wine was found to be the most satisfactory.

In all the patients and the medical men who took this "lower sandwich," as the authors call it, nausea was produced in only one of the patients, a man who was violently opposed to taking the wine. On the other hand, one patient who had had repeated attacks of vomiting, was entirely relieved after taking this remedy.

The authors report on several subjects with painful gunshot wounds in whom the dressings were changed without causing pain or any undesirable after-effects. In about thirty cases, a mixture of equal parts of chloroform and ether in liquid paraffin, instead of the above ether mixture, was employed with much satisfaction.

We believe that this method of producing general analgesia promises much, not only for military, but, for civil practice as well, especially in industrial accidents, and even where operations upon eye, ear, nose, or throat are necessary and are now undertaken under cocaine-anesthesia, but, in which there always is a possibility of ill effects following the local anesthetic. It seems as though the method proposed by the authors would well be applicable to such operations, with the additional advantage that, as it seems, there are no after-effects.

A further highly acceptable application of this general analgesia would be in dental

practice, in cases where very painful work has to be undertaken. Many patients shrink from submitting to dental care and work themselves up to such a degree of anticipatory nervousness that harm to the nervous system is unavoidable. This might be overcome or, better, prevented by an acceptable method of general analgesia.

ABSORPTION OF DRUGS AND POISONS THROUGH THE VAGINA.

The vagina generally is regarded as an organ incapable of absorbing pharmacological agents, and the opinion is prevalent among physicians that drugs applied through the vagina exert only a local effect, without being absorbed into the system. It is in agreement with this idea that very potent and even poisonous drugs are employed freely in the form of douches, tampons, suppositories, "uterine wafers," and so on. While cases of poisoning due to absorption of drugs through the vaginal mucous membrane are on record, these are considered to be exceptional and are commonly attributed to other causes, such as, absorption through the puerperal uterus.

Very little work has been done hitherto for the purpose of settling the question of absorption of chemical substances through the vagina, and, for this reason, a report of some investigations carried on by Dr. David I. Macht (*Jour. Pharm. & Exper. Ther.*, Jan., 1918) is of special importance.

Most of Doctor Macht's experiments had been made with cats and dogs, the latter being found by far the most suitable for the purpose, as the structure of the canine vagina, histologically, is almost the same as that of the human female. Doctor Macht experimented with some alkaloids, such as apomorphine, morphine, pilocarpine, atropine, cocaine, aconitine; also with various salts, including potassium iodide, potassium ferrocyanide, potassium cyanide; also with various antiseptics, namely, phenol, cresol, and corrosive sublimate; besides nitroglycerin. These experiments prove that every kind of pharmacological agent—alkaloids, inorganic salts, antiseptics and esters, can be, and are, absorbed with ease through the vaginal walls.

These facts are of great therapeutic and toxicological importance, indicating, as they do, that drugs, such as opium or belladonna, may rationally be administered, for their

constitutional effects, through the vaginal route. Moreover, they point out the possibility of danger from the indiscriminate employment of potent remedies in the form of vaginal douches, tampons, and similar applications. Vaginal applications employing solutions of bichloride of mercury, carbolic acid, cresol, and similar substances, never are free from possible toxic effect. On the other hand, the more recent antiseptic remedies, notably those produced in accordance with Doctor Dakin's investigations, for instance, chlorazene, have been found to be relatively innocuous, while their action is far more pronounced than that of the older antiseptics.

THE SYNDROME OF EYE-STRAIN.

A very important and somewhat unusual study of eye-strain is contributed to *The Lancet* for March 2, by Dr. Harold A. Des Voeux, this being based upon 100 cases in his own practice, without reference to the work of other observers. The study of these cases thus was entirely uniform and conducted from a single definite point of view. While thus the objection may be made that the study is incomplete, the results have the advantage of uniformity in observations and evaluation.

Doctor Des Voeux finds that the syndrome produced by eye-strain (including migraine) consists in the following symptoms:

Headache or migraine, which is the most common of all manifestations. It is present in from 60 to 70 percent of the patients and in some constitutes the chief, if not the only, sign, while in others it may be trifling or slight.

Depression of spirits is a very common symptom, being present in nearly 30 out of 100 cases. Usually it seems to be owing either to the frequent attacks and the dread of their recurrence or it may be caused by the incapacity for taking an active part in life or from the necessity of giving up a congenial or a remunerative occupation.

Fatigue is definitely mentioned in the history of about 40 out of 100 cases. It is produced, apparently, by the constant bodily discomfort which these people endure. It is not met with in those who experience only occasional attacks of migraine, but, in those whose mental and physical condition has been lowered by almost continuous

suffering or discomfort in one way or another. Fatigue may lead to neurasthenia, unless suitable surroundings and occupation may be found for the patient.

As does the migraine, so fatigue often begins in the morning—a phenomenon which the author finds difficult to explain.

Fears and panics are frequently mentioned by the patients. Fears may consist of an unreasoning dread of what is going to happen, of some approaching catastrophe or impending illness. The panics may take the form of claustrophobia, the patient's fearing being inside of omnibuses, cars or trains, although very often they can ride on the top of the bus or in an open vehicle without being troubled.

Indigestion was frequently complained of and constituted a marked symptom in 30 of the 100 cases. As a rule it was atypical: a want of appetite, distaste for food, and a sense of fulness or slight flatulence; the abdomen, here, frequently is normal, but, may be retracted and small. In some cases, there is definite and severe indigestion, with flatulent distention of stomach and bowels. Constipation may be marked, but, by no means, is invariably present.

Disorders of sleep are very common and are more frequent than is outright insomnia, which latter was observed in only 12 of the patients. Sleep often is heavy, sometimes restless. It may be accompanied by dreams and nightmares. Ordinarily, on waking, the patients feel unrefreshed, tired, and begins the day feeling bad; occasionally dropping to sleep during the day. Giddiness, or vertigo, is frequent, having been observed in from 25 to 33 of the patients: however, no unusual characteristics were observed.

Many of the patients complain of "attacks" the true nature of which may be difficult to ascertain. There may be fainting, especially while in crowded, hot rooms, at concerts, and so on. The diagnosis often is "weak heart" or other weakness. Some seizures seem to be, undoubtedly, petit-mal, and these the author designates as "brain-stop." Train-vomiting is an occasional symptom. It was frequently mentioned by 5 of the 100 patients.

Paralysis of temporary nature is sometimes met with, especially in those in whom migraine is prominent.

Any one of these symptoms may give the clue to a diagnosis in a difficult nerve-case—

a clue which, if followed up by a little cross-examination, often will reveal a heroic struggle against lifelong suffering. A look of intense surprise often comes over the face of these patients as one helps them to dig out the buried past recollections of dropped pleasures and missed opportunities.

Out of 100 patients whom the author studied which includes 35 males and 65 females (showing a preponderance among the latter of nearly two to one), the most complete instances of invalidism were among the women, while several of the men were absolutely incapacitated from work, and the most severe cases of migraine were among them. Eye-strain seems to be a disease that, on the whole, men are more able to stand up against than are women, probably because the former learn early in life more surely to control their nervous system than do women. In women, also, the symptoms tend to be intensely aggravated at or about the catamenia; and, therefore, they are pretty certain to have some kind of attack at least once a month from which a man will escape. The catamenia do not seem in any way to be affected by the complaint.

The patients represented all ages, from childhood up to old age. It must be considered, however, that, when the trouble is recognized in a given case, it may have existed for a long time and that its inception lies back years of the day when treatment is started. Most of the patients, indeed, could trace symptoms back to early youth or childhood. In fact, if the surrounding conditions are favorable to their production, these symptoms will become manifest already in childhood and will become quite pronounced at about the ages between fifteen and twenty-five years. At this period, incidentally, the greatest success in treatment will be attained, no doubt owing to the more ready response of nerve-tissue at this time of life.

Whatever the actual cause of the pain, there can be little doubt that it is some physical alteration in nerve-cells, and that, as years go on, the alteration tends to become permanent and incurable. It follows, then, that every effort should be made to recognize the condition in youth, and, as this is not difficult if sought for, we may hope that in the future the number of these neglected cases will become less.

The condition of the general health of these sufferers indicates no alterations that

would account for the symptoms. Quite 25 per cent are otherwise of good, strong physique and appear normal in every respect.

THE CAUSE AND TREATMENT OF EYE-STRAIN.

In the article just above referred to, Doctor Des Voeux enumerates the syndrome produced by eye-strain as: fears, panics, depression of spirits and vitality, "fits", attacks of fainting, functional paralysis, giddiness, dizziness and vertigo, besides fatigue, indigestion, disorders of sleep, and train-vomiting. These symptoms the author finds are produced or, rather, made worse by railway traveling, sight-seeing, going to theaters, being in crowds, railway stations, crowded stores, shopping, race meetings, indoor meetings, motoring, and less frequently by hard and continued reading.

His conclusion is, that eye-strain is induced more by the necessity of frequent changes in accommodation than by a prolonged but uniform use of the eyes. It is for this reason that patients do not suffer when they are out on the prairie or in the open field. It is moreover, observed more frequently in intelligent, educated people, in those who want to see everything and observe things. It is a disease of town-dwellers and brain-users rather than of country-folk or those living in the wilderness. Hence, it follows that the patients always are improved by living in the country, by outdoor exercise, long walks or rides. They can hunt all day and bicycle for miles without harm, but, attendance at a dinner party or concert will induce a severe attack.

The treatment of eye-strain necessarily must be referred to the oculist. It must be taken into consideration, however, that it is the slight degrees of error of accommodation that do the harm, not the extreme ones. This cause of the trouble is based upon the fact that in the case of severe eye defect the patients usually wear glasses that fully correct the deficiency. In case of slight error of accommodation, however, the vision may be satisfactory, and the patients may be unwilling, for some reason, such as vanity, to submit to the discomfort of wearing glasses. They are not conscious of the constant necessity of changing ac-

commodation and, therefore, unduly over-tax the muscles concerned.

It may be of interest that, of 77 patients examined by an oculist, 54 were hypermetropic and 14 were myopic, both conditions being almost always combined with astigmatism. In 9 cases, the condition was mixed or varied.

It will be seen that the detection of eye-strain in a given patient is very important, for the reason that drug treatment for the conditions of which patients frequently complain is useless and entails a loss of valuable time. In the presence of one or more of the symptoms enumerated in the preceding article, eye-strain should, at least, be thought of and the patient be referred to a competent oculist, who can determine the presence or absence of this distressing condition.

SACCHARIN AS A SUBSTITUTE FOR SUGAR.

In its issue for February 16, *The Lancet* calls attention to the use of saccharin as a substitute for sugar. The very general use nowadays of saccharin is due to the fact that a section of the public values sugar merely for its sweetness, and not for its food value. If this is a fact, and, if other foodstuffs are taken in sufficient amounts to make the use of sugar as a food unnecessary, the sweetening properties of saccharin will be sufficient, and the sugar saved in this manner may be employed in cases where this substance is necessary for its real nutritive purpose, particularly in young growing children for whom the energy value of sugar is of considerable importance. While sugar cannot be replaced by saccharin for the preservation of milk or the preparation of jams, still, in beverages such as tea and coffee, the use of saccharin instead of sugar will result in an important saving of the latter.

As to the possible harmfulness of saccharin, *The Lancet*, after summing up the available facts, arrives at the conclusion that there is no ground for thinking that saccharin is in any way harmful, while its sweetening power is so great that exceedingly minute quantities suffice to satisfy the palate.

In making use of saccharin, the important point to remember is, that it has no food value whatever and that it can be used only

for its sweetening qualities. Whenever the food value is of importance, no substitutes for sugar should be employed.

ON THE SERUM TREATMENT OF DYSENTERY

In the report of a study of over 2,500 cases of dysentery and diarrhea occurring in the British expeditionary force at Saloniki, Dr. Duncan Graham (*Lancet*, Jan. 12, p. 51), says that 95 percent of the dysentery-cases occurring were of the bacillary type. While, thus, the severe cases of dysentery were diagnosed as "clinical bacillary dysentery", a mild form was observed that is designated by the author as "mild recurrent bacillary dysentery", and this was found to be the cause of the diarrhea in a very fair percentage of the cases admitted to the hospital as simple diarrhea.

In several fatal cases of bacillary dysentery, necropsy disclosed a decided dehydration of the tissues, the impression being created that the primary cause of death had not been a primary cardiac failure, but, that the failure of the circulation on the vasomotor side, or "toxemic shock," had been the cause. On the basis of some findings published by Mellanby, that, if the body-fluids are below normal, the absorption of toxins from the intestine goes on at a maximum rate and the absorbed toxic substances exert their full toxic action, the attempt was made to guard against dehydration of tissues, as will appear further on.

Since the symptoms in bacillary dysentery are owing to the absorption of the toxin of the dysentery-bacillus, the author holds, specific therapeutic measures should be directed to the neutralization of the toxin in the most rapid and effective way possible, that is to say, by the intravenous injection of dysentery-antitoxin. It was found that in dysentery the amount of anti-serum injected must be greater than in diphtheria and tetanus. Where it is impossible to give intravenous injections, the serum should be given intramuscularly, subcutaneous injections having been found to be of questionable value.

The injections of antidysentery-serum occasionally give rise to severe and even fatal reactions, these being more common in asthmatics and in people who have previously been treated with serum. The author

suggests that asthmatics should receive a preliminary hypodermic injection of atropine. In order to minimize the danger of the intravenous injections of serum, the author's practice has been, to administer a preliminary quantity of 2 mils (Cc.) and then to inject the remainder slowly ten minutes later.

His experiences in over five hundred cases suggest that the best results are obtained from the intravenous injection of from 60 to 80 mils of serum, followed by from 150 to 300 mils of physiologic saline solution twice daily for the first few days and once daily for the next two. In very toxic cases, a 5-percent glucose solution in distilled water should be substituted for the salt solution.

MEDICINAL AND GENERAL TREATMENT OF DYSENTERY

In the article just referred to, Doctor Graham has this to say regarding the general treatment of bacillary dysentery: As to drug treatment, all patients received, on admission, 1-2 ounce of castor-oil, followed after eight hours, in the blood and mucus stages, by 2 drams of either sodium or magnesium sulphate. This was repeated every four hours during the day as long as the mucus stage lasted. After the disappearance of mucus, a sufficient quantity was given to produce a soft movement, with the idea of injuring as little as possible the healing ulcers in the intestines by the passage of feces. There was no indication for the use of opium in any form, as the pain and tenesmus were relieved by the antidyenteria-serum. Intestinal lavage with solutions of eusol, potassium permanganate, protargol, or physiological salt solution was given morning and evening if the patient received relief from them. The use of enemata containing opium, however, is not a rational method of therapy in bacillary dysentery and should be discouraged. Intestinal astringents or intestinal antiseptics by mouth were not used, as they do not tend to improve the digestion or assimilation of the food in the stomach and small intestine. These drugs, if given at all, should be given as enemata.

The dietetic management is the most important factor in the cure of a patient suffering from bacillary dysentery. Serolog-

ical examinations have demonstrated that second attacks of bacillary dysentery very seldom are new infections, but, rather, relapses from previous ones that have not been cured, either for lack of treatment or because this was not efficient. Changes in the diet must be gradual and the test of cure in a patient before his returning to duty should be: "Can he, while undergoing moderate exercise, withstand the ration he will receive on leaving hospital without experiencing intestinal discomfort?"

In the treatment of the acute phase of the disease, dehydration of the tissues must be prevented, the food must contain sufficient calories for the increased metabolism, and be easily digested and assimilated. The amount of fluid taken by mouth is not sufficient to keep the body-fluids normal or above normal, so that the administration of 300 mils of physiologic salt solution intravenously and a half liter subcutaneously is necessary for the first few days in severe bacillary dysentery. In very toxic cases, the substitution of 5-percent glucose solution for the saline solution has the greater value. This not only provides the required amount of fluid, but, also stimulates the heart and supplies an extra number of calories in the food.

During the first three days, milk should not be given in any form. A suitable diet in the beginning consists of albumen-water, gruels, and clear tea sweetened with lactose. Lactose is of great value, not only for its supply of food-calories, but, also for its favorable action upon the bacterial flora of the intestine. This diet should be gradually changed to one of arrowroot, malted milk, sour milk or diluted fresh milk; lactose dissolved in some fluid being continued.

It is very important to keep the mouth clean by means of washes and the chewing of some solid substance while the patient is on liquid diet. When mucus has disappeared, soft poached eggs and two biscuits may be given, the inclusion in the dietary of custards, pudding, and dry toast being made gradually. Later, a solid diet of chicken, stews, mashed potatoes, peas, and beans may be tried, followed by beef, vegetables, and bread. Untoasted bread is a very disturbing factor and should not be given until the patient is accustomed to a solid diet.

Miscellaneous Articles

Studies on Food Economics

XIII. Cereals, Legumes, Function of Foods

RICE, upon which hundreds of millions of people chiefly subsist, is, by no means, the equal of wheat as a flesh-former, for, it contains a smaller proportion of gluten, containing of it but 6.3 percent as against 15 to 30 percent in wheat. It is harvested much the same as wheat, but, its after-process, among Europeans and Americans, is very wasteful of its nutritive value, because, by a milling-process the outer chaff-coat and the inner gluten-coat of the kernel are both removed, so that this polished rice consists mainly of starch. The Chinese, the Hindus, and Asiatic generally, do not remove the gluten-coat of the rice, hence their ability to obtain nutrition from this grain to a larger extent than we Americans derive from it.

This rice, when cooked, is much sweeter and better as food. However, by the addition of cheese, rice can be made even more nutritious than either wheat or corn. In particular, baked rice pudding is a very nutritious and toothsome dish. This dish, as we all know, is made by adding butter, milk, sugar, and eggs, with an addition of some spice to increase its flavor. In the South, rice often is cooked by itself and eaten in place of garden vegetables, such as potatoes.

The large quantities of rice consumed by the inhabitants of India and other warm countries has often appeared surprising to travelers. This can be explained by the supposition that, owing to the small gluten content, a large amount is required for the wear and waste of the body-tissues and, this same explanation will apply to the large amount of hominy consumed at meals in the southern states. Among our neighbors, one family, of Swedish descent, adds cheese and eggs to hominy dishes—an ex-

ample that it would be well to follow more generally.

In India, a food called *julpan* is made with parched rice. This parched rice is much used by those traveling, and also by laborers at hard work.

Rice cakes are prepared as small loaves or biscuits, and these are easily masticated and digested. Rice fritters are very nice, especially when prepared with milk and eggs. Stewed tripe and rice makes a strong dish, while it takes only about two hours for digestion.

Barley is now rarely used as a bread, but, is chiefly used in the preparation of malt for the manufacture of beers and spirits. It is, however, made into bread in certain parts of Wales and likewise in the northern countries of Europe, and sometimes is added to wheat flour in the making of brown bread.

When used whole as food, it is first parched, as, in many districts of India. It was thus given by Boaz to Ruth, and is mentioned at an even earlier period.

It is customary still for reapers, during barley-harvest, to take bunches of the half-ripe grain and parch it over a fire of thorns. The milk being still in the grain, such parched barley is very sweet and is considered a delicacy. Bread made of barley has a dark color, but, although rough, it has a sweetness and a moist consistency that are not disagreeable. Barley is not so nutritious as either wheat or corn, but, occupies a place intermediate between these and rice.

The special quality for which barley is noted, however, is its ready conversion into saccharine matter in the process of malting.

The component parts of barley are much the same as those of the other grains; gluten, starch, vegetable fiber, coagulated al-

bumen, sugar, gum, and the earthy salts, such as phosphates and carbonates.

In order to malt barley it is steeped for from forty to sixty hours. During this period, the grain imbibes about one half its weight of water, and increases about one-fourth in volume, while some carbonic acid escapes. One hundred volumes of barley when immersed in water have been known to swell to 180 volumes. When the grain will shed its pollen, on pressure between thumb and finger, it has been steeped long enough for the process of germination to take place. The grain, having been washed, is laid in heaps on the couch-floor for twenty-four hours. Gradually the grain becomes dry and then warmer by ten degrees, at the same time giving out an agreeable odor. The sweating-stage has now commenced and the germ sprouts. The greatest heat occurs in about ninety hours. The grain loses about 5 percent in weight, absorbs oxygen and gives off carbonic acid. After the grain has properly sprouted, it is removed to the kiln and dried. After drying, it is ground into a coarse meal, when it is ready for use. During this fermenting-process, part of the gluten and starch has disappeared.

As stated before, the outer coating of the grain is a protection from water. Not so that of the germ, and this is where the water necessary to germination is absorbed.

As most people know, *peas, beans*, and the seeds of other leguminous plants are more nutritious, theoretically, than the seeds of grasses, such as wheat, corn, oats, barley, &c. This superiority is due to vegetable casein contained in them. Like animal casein (cheese), vegetable casein, or legumin, contains, per weight, a larger proportion of tissue-forming material and nutrient salts than found in any other vegetable substances. In fact, we believe it the equal, weight for weight, to that of cheese; like the latter, though, it is not readily digested by some persons.

Legumin may be extracted from peas, beans, almonds or peanuts in much the same way that we obtain gluten from flour. The meal of these seed is digested in water for two or three hours. The undissolved portion is strained off by means of a linen cloth and the turbid liquor allowed to deposit the starch which it holds in suspension; it is then filtered and mixed with di-

luted acetic acid. A white flocculent precipitate is thus formed, which then is collected on a filter, washed and dried. This is a mechanical process, and its liability to variation in results may be learned by anybody who will repeat it or who has separated the gluten of flour.

Practically regarded in relation to our present subject, casein of cheese, and legumin of peas, beans, et cetera, may be considered as the same. Their nutritive values are equal and exceptionally high, supposing they can be digested and assimilated. The one is the most difficult of digestion of the nitrogenous constituents of vegetable foods, and the other enjoys the same distinction among those of animal foods.

Both, casein and legumin, primarily exist in a soluble form; both are rendered solid and insoluble in water by the actions of acids. Both are precipitated as a curd by rennet, and both are rendered soluble after precipitation or are retained in their original soluble form by the action of alkalis. They nearly resemble each other in flavor. In China, cheese actually is made from peas and beans.

The couplet, so old that its origin can be traced equally among the Semitic and the Aryan races—

Peas-pudding hot, peas-pudding cold,
Peas-pudding in the pot, nine days old—

has great practical wisdom in its lines.

One of the curious achievements of chemical metamorphosis is, the turning of old rags into sugar; likewise, into that beautiful substance, celluloid. Our wonder will be diminished and our interest increased when we remember that the cellulose, or woody fiber, of which the rags are composed has the same composition as starch.

The demand for the solution of the vegetable casein, or legumin, which has such a high nutritive value and is abundant in beans and peas, is met by soaking them for many hours in water to which has been added bicarbonate of potassium. Acids coagulate and harden the casein; alkalis soften and dissolve it. Hence, in cooking either peas or beans, an alkali should be added, as it is a wholesome addition and is compatible with the demands of nutrition.

Bicarbonate of potash is the one that best fills the bill.

The analysis of peas, beans, and other legumes, shows a deficiency in potassium,

as compared with the quantity of nitrogenous nutriment they contain. Therefore, in the form of casein, vegetable or animal, we should add potassium, in the convenient and safe form of the bicarbonate—not merely add it to the water in which the peas are to be boiled and which is thrown away (as is the common practice when adding soda in boiling cabbage or greens), but, add the potassa to the actual peas-pudding or Boston baked beans, and treat it as part of the food; it having a greater value than table salt. This is especially requisite when we cook dried peas and beans.

Taking the ordinary yellow split peas and boiling them down in a weak solution of bicarbonate of potassium for about two or three hours, a partial solution of the casein is effected, producing peas-pudding or peas-porridge (according to the amount of water used), this being softer and more gelid than that obtained without the addition of potassa.

The undissolved portion consists of the fibrous tissue of the peas; the gelatinous or dissolved portion being the starch, which contains more or less of casein.

As stated in a former paper, the skins of all seeds are indigestible. This is one of the reasons why cooked dried peas and beans disagree with so many people of poor digestion.

While the skins of seeds are not digested, they readily undergo fermentation when subjected, in mass, to heat and moisture combined. To overcome this difficulty, dried peas and beans should be soaked in sodium-bicarbonate water for some hours, then rubbed with a coarse cloth in water, so as to separate the skins from the seeds. This will be objected to by some, for the reason that peas and beans, being unprotected by their skins in the prolonged cooking they require, will break down into pudding-like masses not very inviting in looks. However, this difficulty may be overcome by using a double kettle or a "fireless" cooker. The result obtained will more than pay for the extra trouble.

Captain Cook, in his three-years' voyage around the world, invariably made his men partake of vegetable messes, which he had the cook concoct from such plants as his botanist told him were wholesome. By doing this whenever he reached any land,

he prevented an outbreak of scurvy—the then scourge of long journeys.

The succulent fresh vegetables and fruits contain a large percentage of potassium, as do also fresh meats. Salt meats part with much of theirs in the brine; which will explain the great longing for fresh vegetables when one for some time is deprived of them in any quantity. In white flour, we lose much of the valuable salts in the bran-refuse we feed our stock. Our city-kept horses must be furnished ashes and salt in order to keep them in perfect health. Also remember how animals, in the winter, enjoy their ensilage fodder.

These are lessons we should learn and, as a consequence, pay less to the doctor.

The Function of Foods: Before proceeding any further on the subject of special foods, their constituents, and preparation, we will consider briefly the function performed by the two principal classes of foods, namely, heat producers and energy-producers.

All oxydating processes result in production of heat, more or less.

Some food stuffs are more readily oxydized than other kinds—the fats, starches, and sugars, for instance.

It is generally assumed that our nitrogenous foods are the most important, inasmuch as they furnish the material for the upbuilding and sustenance of our body-tissues. But, this assumption, without proper explanation, is incorrect.

Besides the gluten of plants and seeds, which supplies the materials from which the muscular parts of animals are formed, there is the oil, which is converted into fat in animals, and the saline and earthy matter of plants, which supply the salts of the blood and the earth of the bones. Only about 25 percent of the whole grain of wheat consists of gluten.

What purpose, then, is served by the non-nitrogenous, or carbon, portion of our food, such as starch, sugar, fat, oils? Is it taken into the stomach and again rejected, or is it decomposed and made to serve some vital purpose in the economy of the living animals?

From the fact that so large a part of vegetable food consists of these substances, we must infer that they are destined to serve some important purpose in the animal economy. As a matter of fact, they are, to

the herbivorous animal, almost necessary for the support of a healthy life.

In order to understand this fact, it will be necessary to advert briefly to the respiration of animals. All animals possessed of lungs alternately inhale and exhale atmospheric air. They breathe or respire. The air they draw into their lungs, supposing it to be dry, consists by volume, of 79.16 percent nitrogen, 20.80 percent oxygen, and 0.04 percent carbonic acid. The proportion of carbonic acid, we see, is very small. However, as the air is breathed out again, it consists of 79.16 percent, nitrogen, 16.84 percent, oxygen, and 4 percent carbonic acid. Thus, the proportion of oxygen is considerably less, while that of the carbonic acid very much greater than before. Consequently, on an average, the natural proportion of carbonic acid in the air is increased 100 times after being exhaled.

In breathing, the animal throws off into the air a quantity of carbon that varies at different times, and in different animals. For a healthy man, the quantity of carbon thus thrown off varies from 3 ounces to 13 ounces; for a cow or horse it is from 3 to 5 ounces, in twenty-four hours. All this carbon is derived from the food.

Animals, including man, therefore, eat, not merely to support or add weight to their bodies, but, to supply the carbon wasted in the life-processes and removed by respiration.

How is respiration supplied with carbon? In the animals that live on flesh—carnivorous animals—it is the fat of their food from which the carbon given off by their lungs is derived. It is only when the fat fails in quantity that the lean, or muscular, part of the flesh they eat is decomposed; for, the flesh eaten is decomposed in the lungs, for the purpose of supplying carbon. But, fat is not the only source of the carbon of respiration.

As stated before, all life-processes are oxydizing processes. Now, one of the functions of the liver is, to produce sugar. This sugar is stored up in the muscle-fibers. Whenever any muscular effort is put forth, there occurs the production of energy and heat and the decomposition of sugar is the source of the resulting energy, heat, and the carbon of respiration.

Had the writer to train Jeffries, the pugilist, he would have given him no other

food, for twenty-four hours, but sugar. The Negroes, with but scant book-learning, but with much labor experience, take sweetened water to drink while they perform hard manual labor. When an animal receives no food for the time, the lungs are fed, so to speak, from fat, also. But, in this case, it is the living fat of the animal's own body.

When digestion is fully performed and hunger is again felt, the body begins to feed upon itself—the lungs still play, as respiration continues for a long time after food has ceased to be taken. Carbon still continues to be excreted by the lungs, but, this carbon is obtained at the expense of the fat, and next of the muscular tissues. Hence, the emaciation that follows a prolonged abstinence from food. On the other hand, in animals that live on vegetable food—the herbivorous animals—it is the starch, gum, sugar of the food that supplies the carbon of respiration. It is only when the food does not contain a sufficient supply of these compounds that the oil first and then the gluten are decomposed and made to yield their carbon in respiration.

In extreme northern climates, both animals and man call for much fat as part of their diet. On the other hand, in Southern lands, sweet foods are much called for, and such should be eaten in preference to fats. Fat is proportionately a greater heat-producer than sugar. Hence, as a diet in the South, very little food is required for building-purposes, and much less for heat; hence, fruits should be given the preference over much meat, especially with regard to the diet of men and women of sedentary habits.

Much of the writer's practice consists in treating ill the result of improper feeding by the patients. Would men be healthy, let them care better for their bodies, studying their requirements.

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CURRENT COMMENT BY A COUNTRY DOCTOR

Pituitary Substance.—In an editorial on the abuse of pituitary extract, *The Southern Medical Journal* presents a timely and emphatic discussion of that subject. Never does a drug come into general use in practice but that misuse of it follows, or accompanies its proper employment. In

the first place, too much is expected. in the second, there is a tendency to employ therapeutic agents just because they are "good for" something or other. And this, without any careful consideration of physiological action, both usual and possible under conditions variant from the ordinary. The editorial mentioned calls attention to the fact that not only will pituitary extract under certain circumstances shorten labor, but, that under conditions of contraindication it will shorten human life as well—by causing immediate accession of the patient to the ranks of the spirit world.

No man is justified in using this potent agent merely in order to shorten labor, with a view to saving himself time. Given proper presentation, dilatation, diameters, and reasonably certainty of no fetal impediment, and the shortening of labor by means of the pituitary substance becomes justifiable; nay, desirable for mother, child, and accoucheur, all of whose individual vitality is becoming exhausted in varying degrees. However, if the mother be a *primipara*, the writer would hesitate long before resorting to the agent and forcing the pioneer through the parturient path, as yet untrodden on the outward-bound way. Circumstances do arise, however, justifying use of pituitary substance; but, when using it in a *primipara*, it is well to remember that a bistoury, a grooved director and a combination of quick action and good judgment can make a lateral cut of much easier repair than a lacerated perineum. With *The Southern Medical Journal*, agreement is had most completely in the contention that attempting to correct malposition of a fetus or to dilate a rigid os with pituitary extract is a sin both of laziness and incompetence. Be sure that the indications exist, then give a fractional dose, and repeat if sufficient contraction does not follow. Being assured on these points and administering in this way, we may get relief for the mother and the wornout attendants. There is no glory in leaving a woman in drawn-out agony just because her mother suffered likewise at her birth.

We must remember to give a balanced look at the two ways to consider labor under modern environment: the view as a natural process and the consideration as a pathologic one because of age, of waist compression, and manifold other unnatural

habits indulged in since male and female man began assuming the erect position.

Pituitary substance, like our other powerful agents, has a force-loosening power that may be used either for good or for evil. Incidentally, it is well to remember that the uses of this animal product are not limited to obstetric employment, but, that it will serve to stimulate and contract a womb at any time such procedure is indicated, although the transient effect should not be depended upon to the exclusion of the drugs of vegetable origin, which must be relied upon to get maintained effect. Also, the agent may be employed to stimulate intestinal peristalsis, especially in order to expel gas—here, also, it is desirable to be sure that one desires the positive action of the drug before resorting to it.

Pneumonia.—An unusual amount of pneumonia this season, has, fortunately, awakened much discussion as to its treatment. Always yet the voice of nihilism is heard, still, the consensus seems to be that this disease requires treatment; much of it, yet, not too much. The writer charges the pneumonia hosts on suspicion, hoping that the case will prove, "*not to have been pneumonia, anyway*." This means that, if the patient is seen early, start is made with calomel, bilein, and podophyllin, following with a laxative saline; while, at the same time, belladonna or atropine may be temporarily pushed, in the hope that, by throwing the circulation to the periphery, beginning congestion may be relieved. With the disease established, aconitine combined with strychnine and digitalin—the "dosimetric trinity"—is given, thus getting early stimulation and heart reinforcement. Calx iodata is given throughout after the initial cleanout of the alvine tract. Lobeline is given in combination with such other sedative and expectorant remedies as seem best indicated in order to keep cough loose and little annoying to the patient. Ammonium chloride must here be thought of. With a very hard pulse and high fever, veratrine is added to the treatment or substituted for the aconitine; gelseminin or a tincture of gelsemium, both of its alkaloids being here desired, may be used in place of the aconitine in early stages.

The external treatment is considered of importance and it usually consists of frequent sponging off with a magnesium-sulphate solution to which has been added a

little creolin or other preparation of the creosolic group. This, together with inunction of the chest with guaiacol, fluid extract of bryonia, and fluid extract of lobelia, in a penetrating base (lanolin and also traga-canth dissolved in whey are excellent) are the writer's most usual combinations, although counterirritation is, at times, conservatively employed. No heavy dressings or applications are used, the cotton jacket or frequently changed undershirt beneath the nightgown being sufficient protection, and avoiding undue weight on the already overburdened thorax.

During the deficient oxidation of pneumonia and the concentration of the forces of nature to repel attacks elsewhere, the remainder of the intestinal flora will be lost, and "intestinal antiseptics" should be carefully looked to. The mixed sulphocarbolates without the zinc salt here come in well.

Wandering and unusual infections should be watched for. The pneumococcus type of meningitis is worse than the cerebrospinal epidemic form. Ear complications should be given careful attention, drum perforation being made if bulging shows; thus a lessened likelihood of a dammed-back infection will be insured. Recently the writer saw, in consultation, a case of sudden onset of jaundice in a convalescent lobar-pneumonia patient. Subnormal temperature was present, low delirium, and suppression of salivary secretions. A fatal outcome was rapid, the patient failing to respond to stimulation and efforts to reestablish secretions. Evidently a pneumococcus-infection of the gall-bladder, with a previous catarrhal condition of the duct.

During convalescence, increasing nutritious diet, as the stomach will bear it, and tonic treatment, with nuclein and the iron and magnesium phosphates serving well, are the indications.

Every case is, of course, one for individual requirements, but, the outlined treatment has in the hands of many given good results. It is hardly necessary to dwell upon the necessity for good ventilation while those diseased lungs are struggling for air: what they can get should be pure and the neighbors who fear "ketching more cold" from the judiciously supplied abundance of fresh air should be read a lecture in the presence of the sick one's family.

Dichloramine-T.—Dakin's solution (chlorazene) marked a great advance in treat-

ment of infected wounds and other bacteria-laden lesions, but, dichloramine-T marks another advance in this line. The use of a comparatively nonirritant chlorine-freeing substance in oil base, not requiring frequent renewal, is one more step toward perfection in "bug fighting." The writer has been trying out this new agent in genito-urinary work, and so far with marked success. One case of eroded cervix resulting from an old tear and subsequent irritation and infection looked so bad that immediately the thought of cancer presented itself. Engorgement of the womb was relieved by means of suppositories of dehydrated magnesium sulphate, with every night and morning hot donches and then dichloramine-T employed. The douche was first given, then the cervix was dried, and the application was made through a speculum, by means of a piece of gauze, with a dressing-forceps, a light tampon following. A 2-percent solution was used and applications were made daily for three days, then on alternate days for eight days more. Examination of the patient after a month of treatment shows apparently normal conditions, except for the scar of the laceration, operation for repair of which the patient has refused; hence, of course, a return of her trouble may be expected.

If the few cases of male gonorrhea thus far treated are to be followed by equally good results, dichloramine-T will become a routine remedy in the writer's treatment of this trouble. The agent may be applied by means of a strip of gauze or candle-wick, either through a urethral applicator or by means of a small probe. It takes trouble and time to introduce, but, it can be done and the probe withdrawn while the finger pressure retains the packing. Make the application immediately after urinating and have it retained as long as possible. It must be remembered that acute gonorrhea is an anterior urethritis, unless an old infection has been awakened, hence, the packing need not be carried back very far. Judgment will here be used in each case.

One case of double infection—chancre and gonorrhea—gave remarkably satisfactory results. A chancre involved the head of the glans, eating into the meatus. It was a nasty case, involving two units of the unholy trinity of venery. The chancroids were given initial cauterization with nitric acid, then the treatment above outlined. The patient was discharged this day,

cured of both disorders, after fourteen days of treatment. Internal treatment had been addressed to the gonorrhea, also. Dichloramine-T seems to have great possibilities in the treatment of the lesions of venereal infections.

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MODERN TREATMENT OF SUMMER DIARRHEA

In the summer and fall months, the general practitioner has many cases of flux to contend with, every form of diarrhea and dysentery usually being seen during this season of the year. Unless intelligently and promptly treated, these disorders are liable to assume a chronic form, from which the patient may be long in recovering; in fact, in a few instances, they never fully recover, being left in a state of semiinvalidism and an easy prey to some fatal malady, such as tuberculosis, hepatic abscess or chronic eczema. Consequently it should be the aim of the physician to terminate the disease in its acute stage. Of course, as a rule, these summer diarrheas, if seen early and treated intelligently, will end with the acute stage, unless there is some underlying constitutional taint or disease that prevents a cure. However, if neglected, they become difficult to manage and may hang on a long time, causing the physician in charge much worry and bringing but little professional credit. In the following, I will outline a plan of treatment that has served me better than anything I have yet tried. It is understood, of course, that no specific rule or plan of treatment can be formulated to suit every case, still, this treatment can be varied to meet almost any condition that may arise.

Acute Enterocolitis.—In an acute attack of enterocolitis, the patient, first of all, is put to bed, in a well-ventilated room or as good as the environment and circumstances will allow.

The patient (adult) is now given one granule of 1/800 grain of aconitine hydrobromide every twenty to thirty minutes, until the skin becomes active, the arterial tension is lowered and the temperature declines; then they are given, as indicated, one, two, three or four hours apart, or are withdrawn altogether. If there is much tenesmus, give one granule each of emetine (gr. 1/64) and atropine (gr. 1/500) every

half hour until all straining at stool disappears, unless mouth and throat get too dry, in which case the atropine is to be withdrawn. Withhold all food for twenty-four hours, at least, and longer if thought necessary.

Indeed, I know of no measure that brings such brilliant results in cutting short these diseases as the complete withdrawal of every kind of food for a period of at least twenty-four or thirty-six, or even up to sixty-two hours, as the physician may consider advisable. Always make this period of abstinence long enough, for, no patient is going to suffer any great inconvenience from a fast so short as here suggested; and under no circumstance permit yourself to be influenced by parents or friends to shorten the time when your judgment tells you that you are right.

The feeding of children, and of adults as well, when the alimentary tract is diseased, is a grave mistake in acute affections. Yet, parents and friends are likely to insist upon it and to make a great ado when the doctor prohibits giving any food whatever for twenty-four or forty-eight hours: "the doctor is trying to starve them to death." If the sick child is vomiting, water, also, should be withheld until the vomiting ceases, while even in those cases in which there is no vomiting it should be given but very sparingly.

When there is vomiting, a little crushed ice should be administered cautiously, to allay the thirst and heat. Give 1-10 grain of calomel every twenty to thirty minutes until one or two grains, according to the age, have been given, then, two hours after the last dose, give a good dose of castor-oil or laxative saline. Once the bowel has been thoroughly cleared, and you are sure of that, then start with the combined sulphocarbolates, continuing until the stools are odorless. The abstinence from every bit of food, the thorough cleaning-out of the intestinal tract and the rendering of it aseptic will effect a cure in the majority of cases.

If the patient has been seen late or if the attack does not yield to the foregoing treatment, then proceed as follows: Flush the bowel out once daily with physiologic salt solution, then give a combination of zinc and codeine every two or three hours. If pain is severe, the modified hyoscine-morphine-cactin granules may be administered by the mouth or, for adult patients,

the regular tablet, formula No. 2, can be given hypodermically.

Chronic Enterocolitis.—Should a case of enterocolitis be one of long standing, the patient greatly emaciated and bordering on collapse, give small doses of atropine, brucine or strychnine, often repeated until reaction sets in. Also, push nuclein, to sustain vitality and to increase the hormones of resistance.

For frequent serious evacuations, I know of no better remedy than copper arsenite, given in small doses and often repeated, to effect. It must be given in solution.

Dysentery.—In the case of dysentery the treatment, in the beginning should be very thorough in order to cut the disease short and thereby prevent it from becoming chronic. Prescribe as follows: Aconitine for high arterial tension and elevated temperature, atropine and emetine in full doses to control the tenesmus; then small doses of calomel every fifteen minutes until 1 1-2 to 2 grains has been taken; then, in one hour from the last dose of calomel, give a full dose of citrate of magnesia, castor-oil or a laxative saline—the latter to be repeated if there is any question as to the alimentary canal being entirely cleared of any offending material it contains.

If the patient is seen early, everything is now in readiness to bring the case to a close. A full grain of emetine is given dry upon the tongue and then the patient is to be kept very quiet, with head very low, and encouraged to go to sleep. In most instances, a genuine ipecac-stool will be produced in eight to twelve hours, after which recovery will promptly follow, provided the patient is carefully dieted and given the necessary tonic treatment.

The emetine, I must mention, though, should never be given if the patient is in the least nauseated. Or, if the patient should vomit the first dose, then the stomach should be prepared for it by administering menthol, and, if necessary, cocaine. A tablet of menthol placed upon the tongue and dissolved slowly, and repeated if necessary, will usually be found sufficient. The after-treatment should be directed with a view to building up the patient as rapidly as possible, so as to prevent relapse or the development of some other disease. And, among our best tonics for this purpose, will be found strychnine, brucine, sanguiferrin, and the combined arsenates with nuclein. Patients placed upon one or more of these

tonics and carefully fed will soon be gaining strength and flesh.

One word before I close. Every now and then, an ulcerated condition of the lower bowel will develop and cause a great deal of worry and suffering. If these ulcers are low enough down to be brought into view, they should be touched with a solution of silver nitrate; if too high for this, a douche of a weak solution of the silver should be given. Better still is a douche of chlorazene, of between one-fourth and one-tenth percent, according to the age and condition of the patient.

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MODIFIED PERCY TREATMENT OF CANCER

As usual, the April number of *CLINICAL MEDICINE* contains its splendid editorials. The ones regarding x-ray and radium in the treatment of cancer are good and the query concerning magnesium sulphate à la Burgess is applicable. We have tried it with probably too little faith and for too short a time, but, one dislikes to waste time in these cases. Doctor Burgess' advice to use magnesium sulphate locally has done more for my practice in the past twelve years than any other measure I have ever used. All glory to Doctor Burgess.

What I started to write about is something new, yet, not so new regarding the treatment of cancer. In your suggestions as to the treatment of cancer, don't forget Dr. J. F. Percy's cautery method. It is ahead of the scalpel in the majority of cases and will destroy cancer where one dares not go with the knife. But, newer still is the ultraviolet light for surface cancers, and I am not so sure but that I may find it extremely useful for those affecting the interior of the body.

My method, and one which is giving present results, is a combination of Percy's cautery and ultraviolet light. The cancer is first thoroughly "cooked" with the Percy cautery, then I start, about three days later, with the Kromayer lamp and give daily treatments until the lesion is brought under full control, when it is treated less frequently.

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[This method appeals to us in the case of newgrowths that are get-at-table, but,

what are you going to do in the case of so-called inoperable cancer? In this condition, neither the knife nor the cautery will avail. Just now, the present writer is watching with deep interest a case of abdominal cancer that is multiple and can not be reached either with knife or cautery. Some months ago, the symptoms were very urgent and an unfavorable outcome seemed near. The pain and distress were relieved by means of radium, the action of which was supplemented by the x-ray and also the high-frequency current. In time, it was found necessary to reduce the dose of both materially, and at present the patient is very comfortable and is, in fact, regaining ground that had been lost in the course of several months.

In order to overcome the severe anemia, blood transfusion is being done, small amounts of blood (100 mls) being injected by the method of Doctor Abelmann, of Chicago, by the originator himself. At present, the outlook is surprisingly favorable, and the expectation is justified that the life of the patient will be prolonged for a long time. Some day we expect to report on this case in greater detail.—Ed.]

WOMAN, AND MAN'S IMMORALITY

I prize *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* very highly and should be sorry to miss any numbers of it. The February number was especially interesting to me; and, being a woman, I want to thank Doctor Eskridge for her letter, especially as it brought out such a manly editorial comment.

If every man and especially every doctor could truthfully say that he thought, believed, and felt that "the American woman is something so fine and precious that it is up to us men to protect and shield her, every one of her, from everything harmful or unworthy", then, oh then what more could we want or ask for? And what a host of world-wide and age-old problems there would be solved!

I have always held that the one inalienable right, God-given, of every woman was, the right to reverence manhood and man; but, tell me how an intelligent, high-minded, pure-hearted woman can reverence, for instance, the one of the twelve doctors in my girlhood home who introduced horse-racing into that town and afterward boasted in my father's hearing on the street that he

alone had sixty young men under his care as a consequence of other things introduced with the horse-racing? And how could an intelligent girl with high ideals—knowing then, as well as now, after years of study and practice, the outcome of it all—how could such a girl link her life and the destiny of the future with one of those deluded foolish victims?

Oh, yes, I have tried to live up to Meredith's ideal of woman: "The mission of genius on earth! To uplift, purify, and confirm by its own gracious gift the world, in spite of the world's dull endeavor to degrade and drag down and oppose it forever. The mission of genius: to watch and to wait, to renew, to redeem, and to regenerate. The mission of woman on earth: to give birth to the mercy of Heaven descending on earth. The mission of woman: permitted to bruise the head of the serpent, and sweetly infuse through the sorrow and sin of earth's registered curse. The blessing which mitigates all; born to nurse and to soothe and to solace, to help and to heal the sick world that leans on her."

Thank God that I can feel, after thirty-seven years in the rough and tumble of battle against heavy odds and with many handicaps, that I have not altogether failed. And that "I would not, if I could," change the path I have trod.

Yet, not woman, nor women, but, the seed of the woman, the Divine Christ, is the only hope of salvation from earth's desolation. I have pondered and studied and brooded over, especially, these moral, social, sex, and venereal problems for years. And for years I wondered why into the genealogy of the Christ had entered so much evil. As, Rahab the harlot of Jericho, Ruth the Moabite, and through her back to the historic venereal plague of Baalpeor, where twenty-three thousand died in one day, on back to the incest of Lot's daughters, and then down to David and Uriah's wife; but, a study of vaccination and serum-therapy, with the principles underlying them, has completely solved the problem and flooded the Divine plan of salvation with dazzling light for me, amplifying and extending, to my mind, Drummond's "natural law in the spiritual world", Christ the lamb without spot or blemish, immune to sin, yet, made partaker of all manner of sins, that his life, his blood might save us who accept and receive that life from sin, thus becomes no more a mystery than the

saving of our army from typhoid fever by vaccination.

Further, I believe there is no other solution for venereal problems than the inoculation of the moral nature with the Christ-life, so that the whole moral nature is transformed, until sin is impossible because there is nothing in one's nature to respond to temptation. Man may seek out many cunning inventions, but, God will not be mocked. They who sow to the flesh shall of the flesh reap venereal disease and death. And those who overcome temptation, through "the blood of the Lamb," will be given the crown of Life—Eternal Life.

Conant, Fla. OLIVE E. W. SWAN.

DON'T LISTEN



PEOPLE TELL YOU

"It's only a cold in the eyes"
"Use a poultice of tea leaves," etc.

THIS IS DANGEROUS ADVICE
NO HOME REMEDIES WILL CURE
"BABIES' SORE EYES"

4 National Committee for the Prevention of Blindness, Inc., 130 East 22d Street, New York, N. Y.,

POTASSIUM BICHROMATE FOR VENEREAL WARTS

I hope you will pardon my coming again to the front; I almost feel ashamed to speak so often, as the younger men should now take the field. However, I would like to add to the remedies you suggest for vulval verrucae, or venereal warts, the use of potassium bichromate. I have repeatedly obtained very happy results from simply moistening crystals of the chemical with water and applying to the warts until

they were the color of the remedy itself. In a few days, after one or two daily application, the excrescences disappear.

C. S. COPE.

Detroit, Mich.

[Doctor, please do not stop writing on the plea that the younger men should now take the field. The younger men are very busy working up, and attending to their practices; to the older men we look for counsel and advice. I do not mean that we do not want to hear from the former—very much the contrary. We want to hear from everybody who has something good to say. That includes the youngsters and the oldsters. More power to all of them. So, come again, doctor.—Ed.]

A PUZZLING CASE: ECHINO- COCCUS-CYST?

What do you make of this? A woman of fifty years, married twenty-five years, had no children; several of her family died of dropsy, otherwise her family-history is good. She was seen first June 29, 1917, when I found her recovering from a faint, or more probably, shock due to a ruptured cyst. She was much reduced in weight and of very brown complexion. She was as well as usual after a few days. I saw her again on August 6 and found her suffering from a pain in the region of the gall-bladder. Her liver was greatly enlarged downward and a vague pain had existed in this region for at least a year. A tentative diagnosis of malignancy of the liver was made and concurred in by a consultant.

A few days later, an abscess (or cyst) ruptured into the intestinal tract, which immediately reduced the liver and ushered in a very severe attack of inflammatory rheumatism. She was sent to the springs as soon as possible and got much relief, although no gain in weight. She slept and ate well, but, continued weak, until, on January 21 (1918) general dropsy began to develop. She died February 28, and the necropsy revealed many cysts of the liver, the largest unruptured one being about as large as a small baseball. No other evidence of malignancy was found.

C. F. FLETCHER.

Summan, Ind.

[On being asked what treatment had been instituted in this case and what was

the nature of the liver-cysts found, the Doctor replied that the cysts were very tense, with thin, tough, transparent wall and containing a thin yellowish clear serum. There was no evidence of daughter cysts. No chemical or microscopical examination was made. The liver was knotty on the surface and the doctor, as also his consultant, believed the affection to be malignant, probably cystadenoma. The treatment had been purely symptomatic.

We can not quite agree with Doctor Fletcher in his opinion that the disease was malignant in character. We miss especially any reference to the cachexia, which is so marked a terminal symptom in malignant disease, and to the characteristic pain. Also, no reference is made to metastases, which occur invariably; in fact, malignant growths of the liver are themselves, as a rule, secondary to a preexisting affection elsewhere, especially in the kidneys. A pathologist friend informs us that the occurrence of metastases could not be overlooked at the necropsy, because they would be made up of liver-cells, and these would function, producing bile, and, therefore, be stained green on section. The point would not escape the attention of the operator on postmortem examination.

The tentative diagnosis that occurs to us as most probable is, echinococcus cyst; and the description of Doctor Fletcher's case, while incomplete, tallies far better with those found, for instance, in Delafield and Prudden's textbook on pathology than it does with the accounts of malignant disease of the liver. If we assume echinococcus to have been present, the rupture of a cyst into the intestinal tract would, in fact, have been followed by a severe nervous toxemia, the symptoms of which simulated those of acute arthritis. Unfortunately, the necropsy investigations were not carried far enough to settle the points at issue. However, it seems to us that the diagnosis of echinococcus-cysts is better founded than that of malignancy.—ED.]

NONOPERATIVE RELIEF OF UTERINE ADHESIONS

The following case may be of some interest to some of your readers. *

A woman called me March 15, saying she had not been able to void urine for about twelve hours. After catheterizing, an examination disclosed the presence of uterine retroversion, with adhesions. The

cervix was at the extreme anterior part of the vault of the vagina, the fundus was immovable and in the hollow of the sacrum. Her last menses had occurred on the first of January. The patient is thirty-three years old and has been married fifteen years. She states that she had a miscarriage during the first year of her married life, in the second month, but, has not been pregnant since then. Nine years ago, she had abscesses and was sick a long time and her attending physician advised operation. She says the abscesses discharged through the vagina and her doctor told her she never could become pregnant because of the uterus being "upside down and grown fast to the back." I was called in again three or four times to catheterize, and each time I tried to press the uterus forward, both through the vagina and through the rectum, but, could not move it at all. I advised the knee-shoulder position, with deep breathing, and also walking on all fours, a dose of epsom salt daily, and a saline enema.

Another physician was called, on April 4, when I could not go to relieve her, and he, after an examination, expressed the opinion that the uterus could not empty itself in case of an abortion, also that a pregnancy surely could not go to full term unless the adhesions first were destroyed by an operation.

Then, April 11, I gave, hypodermically, one ampuleful (2.3 mils) of fibrolysin and, on April 12, a second dose of the same, acting on the theory that, if it would quicken the absorption of exudates and scar-tissue, it might help in this instance. I taught the husband how to use the catheter and did not see the patient again until April 20, when I called at the house to see how she was getting along. She told me that she had been quite sick and almost had sent for me, but, had grown somewhat better. She had pain in the back and spasmodic pains in the pelvis during April 14, 15, 16, and 17 and remarked to her husband that she felt "things were changing inside."

An examination showed that the woman was right. The cervix now was posterior, while the fundus felt softened and in its correct position.

Question: Did the fibrolysin do this or did pregnancy release those adhesions?

SARA T. CHASE.

Traverse City, Mich.

[We are inclined to reply to both questions in the affirmative. It is on record that, when incarcerated in the lower pelvis, through malposition and adhesions, a womb has righted itself as it increased in size during pregnancy. In this instance, the adhesions seem to have been unusually firm, and it is very probable that the fibrolysin softened them so that the fundus of the enlarging uterus could rise above the brim, being assisted therein by the knee-shoulder position and the exercises on all fours, as the patient had been directed to take.

We are much impressed with the beneficial action of both of the latter factors. The knee-shoulder position, when regularly and persistently assumed just before retiring, is a potent aid in correcting prolapse of slight degree, and certainly it relieves the strain upon the ligaments. Walking on all fours tends to have the same result. Altogether, we congratulate Doctor Chase upon her successful management of this case which otherwise might have taken an entirely different turn.—Ed.]

THE NEED OF IDEALS

Your article in the April number on typhoid fever awakened me to the fact that I am delinquent, so, I am sending you my check for the full amount. The ten cents extra is to cover postage wasted in reminding me of my duty. I full well remember twenty-five years ago when you started with a little sheet—*The Alkaloidal Clinic*—but, if small, it was full of good sense and ebullient enthusiasm. More—it stood for an ideal.

Alas! if we all could, early in life, just get an ideal. In this age of transition, the great leaders and thinkers should, like yourself, have more to say about ideals. I never was taught any, or, at least, not in such a way as to fasten themselves upon me so strongly as to make them the very light and guide to my pathway, so that all obstacles would become trifles. But, now, at a late age, I see some light, and I behold that "if thine eye be single thy whole body shall be full of light."

So, I would like to ask, if the great government of the United States is going to take over the public utilities, why not take over the medical profession as a

whole, and eliminate that which is of the charlatan order and demand of that which remains results, efficiency, scholarship. The medical profession is the people's greatest utility. Today, we doctors should be amply paid by the government and required to take care of the children in the schools, as of our own, and instruct them and their teachers about the common rules of health, remove diseased tonsils and any adenoids; correct poor eyesight; we should have access to the churches and councils and assert ourselves in the midst of all the confusion, folly, "isms" and "pathies" that are preying so harmfully upon the unprotected people of this nation at this time.

It requires order and authority to bring cosmos out of chaos, truth out of error. While I am away out here in a remote nook, far removed from the great centers of thought and motion of this nation, yet, I can faintly see that after this bloody cataclysm is over, if the world really is to be improved and if all this blood and suffering is not to be in vain, it will be because those of us who are left will have a new and higher ideal and will all cooperate and each joyfully play his part, whether high or low, in an unselfish effort to do what we can for the general advancement of all.

While this is not written for publication, still, I hope that there may be some word or thought in it that will inspire you to give us a leading thought in the right direction.

WALTER C. COX.

Hartline, Wash.

[The Doctor's wish, that we all could follow an ideal, beginning early in life, is well put. His remark has made us think about ideals and we shall endeavor, some time in the near future, to put these reflections on paper.

It is hard to surmise just what will develop through this war and after it. Opinions are being voiced here and there that the social and economic position of physicians will be materially altered. Some men refuse to consider that it is possible for the old relations to be restored and hold that it will be unavoidable for the government to "take over" the medical profession, for the reason, as Doctor Cox suggests, that it really is a great "public utility." However, there are so many points

in this possible and some say unavoidable change that we hardly can discuss it in any detail. Without a doubt, however, there is a distinct trend in that direction, and we, even the older ones of us, may witness the actual change.—Ed.]

MASON, NOT NASON: A CORRECTION.

Dr. T. R. Mason calls our attention to an unfortunate typographical error that occurred in connection with his article, entitled "Oldtime Emergency Surgery," that appeared in *CLINICAL MEDICINE* for April, on page 299. The article should have been signed Mason, instead of Nason, as printed. We will ask our readers to enter this correction in their copies of the journal.

DIDONK: A NEW WAR SLANG.

A new slang word seems to be creeping into our everyday speech, among the many bred by the war, and it may not be amiss to pin it down at the very start. This new odd-sounding and queer-looking word is "didonk," and this is its genesis:

As we have a way of accosting a person with "Say!" so the Frenchman opens up with "*Dis donc*," or "Tell me, anyway." (*Dis* is pronounced "dee.") Our soldier-boys, it seems, have grown very fond of their Gallic comrades and have fastened this recurrent phrase upon them as a pet name, and now speak of them affectionately as the dindonks.

By the way, who will tell us the meaning or origin of *piu-piu*? How comes the reduplication?

PRACTICAL PREVENTIVE DENTISTRY

The attention to the teeth is not a vogue of society nor an effort to maintain good appearance. While dentistry has a feature of esthetics, its larger, and its main claim is one of necessity. There has been evolved, during the fifty-one years of the development of the present practice of the dental profession, the system now termed "efficiency dentistry." A patient can, by periodical visits to the dentist, minimize the decay of the teeth approaching the zero point. The dentist, at each periodical visit

of the patient, examines the teeth, to discover the presence of unsoundness, and, if a cavity is found, he fills it—the only known way of stopping dental caries. Such a discovery is, of course, made long before the decay would be advanced enough to cause the patient to notice it because of any pain.

Sometimes patients complain of lassitude and lack of energy, but, of course, do not attribute it to the slight sensitiveness of a small cavity in a tooth, for, at this stage, the cavity often is in between the teeth and not observable except to a dentist. The average patient does not complain until a tooth aches and the decay has reached the sensitive nerve-pulp. During the entire progress of a decay in a tooth, from the time of the first softening of the enamel until the cavity has enlarged and deepened and it starts to ache, an increasing irritability is being developed, until the pain in the tooth announces to the patient the true cause. During this time, the patient, if not in touch with a dentist, often resorts to sedatives; which, of course, do not rectify the cause in the least and only complicate the condition. By following the system of "efficiency dentistry," the decay is discovered by the dentist long before it reaches the disease climax form of an aching tooth, so that the fillings are very small and consequently, the teeth remain strong and efficient.

Patients who, upon advice of their dentist, faithfully followed this principle of efficiency dentistry have very few filled teeth and should never have a toothache. They should, likewise, always be at high efficiency as far as their teeth are concerned.

The basic idea of disease prevention has found favor in industrial institutions, where human health and the energy of the operatives has so much to do with the material output. Industrial plants employing large numbers of men and women have recognized the idea of health maintenance, by installing medical rooms with doctors in charge, recreation- and reading-rooms with easy chairs and books and periodicals, gymnasiums, roof-gardens, billiard-rooms, summer outing-houses, adequate heating, ventilating and lighting plants, et cetera, and the operatives have organized baseball teams, card-clubs, singing societies, and amateur theatricals; also, talks and lectures are furnished on salesmanship and

shop procedure. However, dentistry has been left to the individual, and the diseased tooth is attended to only when the ache or pain comes. The dentist eventually gets the patient, but, what about conserving the energy of the patient in the meantime? The dentist is consulted so late and the decay has gone so far that it means either a large filling, the extraction of the tooth or a restoration of some kind, such as an artificial tooth, a crown or bridgework. This calamity—which it is—is avoided by preventive dentistry, while, incidentally, the individual's nerve-energy for work is conserved.

Many large concerns have eventually installed dental offices, with dentists in attendance, whose business it is to care for any dental disabilities that might interrupt the continuity of business operations.

The work of the industrial dentist consists in periodically examining every patient in the plant, indicating on a card the dental work needed and checking the work after the patient has had it performed by his or her family dentist. In this way, the industrial dental clinic-manager discovers the decay and has it attended to by the family dentist or takes care of it himself.

Is it not possible that more business concerns would adopt this method of conserving the health and of increasing the efficiency of their employees if the real value of this work as an efficiency agent were better understood? It would be good business even for concerns employing only a few people. In fact, it could very profitably be carried into the service department of domestic life. It should be a matter of great satisfaction to know that one's servants are free from infectious dental as well as other diseases that might make them a menace, rather than desirably efficient.

ALFRED C. CROCKER.

Cincinnati, O.

AN UNUSUAL SMALLPOX REINFECTION

On the 18th of February, I was informed by the attending physician that a case of chickenpox he had been treating for fourteen days (sic!) seemed to develop into smallpox. I visited the patient and found that he had the "real thing." On the 21st of that month, his grandmother, in the same house, had all the prodromals of the same

disease and after twenty-four hours began to "break out". The pustules, although not numerous, were of the well-defined type. Both got well and disinfection and fumigation were completed. On the 7th of March, the same physician called me again in consultation. The grandmother had been ailing of vomiting, high fever (104° F.), and severe backache. Next morning, she had a "breaking out," which a little later proved to be again real 18-carat smallpox, without any possibility of error in diagnosis.

On the 1st of April, a man came to my office with a well-defined case of smallpox. When I told him what it was, he said that it could not be; that he had used several bottles of Mile's nervine and "broke out" like this before, and that another physician told him it was a dermatitis medicamentorum bromi. And, true, the lesions of a week ago were there yet. But, they were only "forget-me-nots", and the present ones were the true "roses, tulips, hyacinths", and all such further blooming flowers as there are found in the garden of smallpox.

In my 44 years of practice I never saw a Caucasian affected this way, although I did see this thing in British India in Hindus, and in Java in Malays. Has anyone else had this experience?

D. A. ZWIGTMAN.

Niles, Mich.

DICHLORAMINE-T IS THE THING

The greatest of all drugs upon which doctors agree

Is now known as Dichloramine-T.

A war product, an asset to the nation,

Whereby many useful lives are saved for procreation.

Upon infection, it has shed a new light—

Bacteria, pus, and "corruption," all take flight.

Iodoform, Peru balsam, bismuth paste are past,

Dichloramine-T has swept them like a blast. Mustard, ichthyol, slippery-elm saw their fate, Since Dichloramine-T was declared the up-to-date.

Use Dichloramine-T—patients delight in its revel

And will get well in spite of "corruption" or the devil.

W. J. T.

North Carolina.

SOME USES OF LIQUID PARAFFIN

Liquid vaseline, white oil, medicinal oil, liquid paraffin—to mention some of the many names this mineral oil goes by, has

been used for some time, as everyone knows, as the remedy *par excellence* for chronic constipation. However, many practitioners may be ignorant of the other uses to which this substance may be put. The following are some of the most common:

1. As an eye-wash in acute conjunctivitis and after the extraction of foreign bodies from the cornea, burns of the cornea, blepharitis, and so forth.

2. As an injection for gonorrhea in the acute stage, to allay the extreme irritation of the urethra.

3. For urethritis, for allaying congestion of the uterus, to tampon the vagina with cotton impregnated with a mixture of ichthyol and liquid paraffin (1 : 24).

4. For chronic suppurating wounds. Pack with gauze saturated with Morrison's mixture of

Bismuth subnitrate	oz. 1
Iodoform	oz. 3

Liquid paraffin enough to make a paste.

5. For burns use a mixture of zinc oxide and liquid paraffin, 1 : 24.

6. For intestinal antisepsis, as a laxative in typhoid fever, as a sedative for the pains of gastric ulcer. Mix 3 drams of bismuth subnitrate and 3 ounces of liquid paraffin, and give one tablespoonful three times daily.

7. For acute dermatitis apply a mixture of bismuth and liquid paraffin.

8. For painful piles, inject 2 ounces of liquid paraffin before and after defecation.

A. K. MOILLIET.

Minatitlan, ver Mexico.

A PROGRAM FOR BETTER BABIES.

In the February number, Dr. C. M. Tinsman asks, "Do you not think that it is about time that the human family should begin to absorb a few commonsense ideas from some old rancher? Instead of filling up our magazines with articles advocating the raising of more babies, better fill them up with articles advocating the raising of better babies; by selection of better males and females to breed, etc." To which the editor replies, "Men and women can not be selected for breeding like cattle. We can not deal with ideal conditions, but must make the best of existing circumstances."

The consideration of this question is particularly opportune now; and it is for the medical profession to give to the people, collectively and individually, the vitally

important instruction needed.

It is true that we can not select human parents like cattle, and yet we can use means to raise the ideals of men and women and so to educate them on hereditary influences that there will be a gradual improvement in the race. Unless we do this, degeneration must continue. The average woman has not yet so far lost her primitive instincts, in this respect, that she will choose an idiotic cripple as quickly as a stalwart man of wit, and, just as natural sexual selection produced the beautiful plumage and noble bearing of the male bird and the strength and nobility of the male horse and stag, so will the inculcation of better knowledge and higher ideals tend to raise the breed of men—without selecting them like cattle.

In a state of nature all animals tend to improvement by natural selection, whereas civilization tends to deteriorate the human stock, which makes it the more urgent that we should endeavor to counteract these influences. Wealth and position have, largely, become the incentives to selection instead of manhood and womanhood. The sickly and profligate young man is as likely to be selected by the average young woman, if he happens to have the accident of wealth by inheritance, as the more vigorous and nobler young man who happens to be poor. This tendency can be counteracted by education; and this is clearly the duty of the medical profession.

When we say that Johnie Jones is a boy of good breeding, everybody understands us to mean that he has had good home training—that his environment has been good. Every worthy parent recognizes the child's right to such "good breeding"—to the best home influences that can be supplied for him; and every civilized country in the world now furnishes every child an extension of the home training in the form of a common school education, so that he shall become the best member of society that such training can make of him. But, unless the child be well born, the best environment that can be furnished him, by home, church and school, can avail but little; to make an intelligent, efficient citizen of an idiot is a task as hopeless as to make a good sheep dog out of a common cur or a race horse of the foal of a peddler's nag.

Some hold that good breeding is altogether a matter of environment—that any

child with good home influences and a good education may become a good citizen and that genius is accidental, a thing entirely beyond our command. They point to the fact that our most eminent men and women, many of them, came of obscure parentage—that the Lincolns and Franklins and Edisons are as likely to come of the humblest parentage as the Garfields, the Lincolns and the Franklins are unlikely to leave descendants above the average.

The dog and the horse are far more improvable by education than the sheep and the cow. You can improve a collie by training ten times more than the average cur. To say that the ancestry of a child is of no importance is as unreasonable as to say that the ancestry of a horse or a dog is of no importance. Environment means so much that heredity seems to mean little, but, none of us has so little faith in heredity that if we were about to adopt a child we should ask no questions about his antecedents. In fact, we know that it is at least as important to improve the human breed as to improve our live stock. What we need is, not so much a fuller realization of the importance and of the possibility of doing this, as, a definite program for beginning the introduction of the superman; and what more opportune time than the close of the old regime that produced the race that could institute such a hell upon earth as the present war?

No stock breeder proceeds on the theory that a "sport," a reversion, or variant, from ancestry, is as likely to occur as a true descendant, yet, we proceed as though good breeding were solely a matter of good environment. The case of Shakespeare is commonly quoted by those who pretend to believe that genius must be a matter of chance, or, at least, a product of some accidental combination of circumstances over which we need attempt no control. We know so little of the history of this greatest genius of all time, that the case is unfavorable as an example of how the principles of heredity as well as the influences of environment might be used for the betterment of our race, yet even this case is instructive. His mother was a woman of unusual intelligence and had a decided taste for the drama, which she found an opportunity to gratify by the family's moving to Stratford, a short time before his birth.

The ideal has a much larger scope in the development of a better breed in the human

than in the lower animals. There are many ways in which the ideal of nobility, of physical and mental manhood and womanhood can be raised, but, the most efficient would be, the adoption of a standard and the stimulation of effort for the production of better babies. By way of suggesting the initiation of a system for doing just what Doctor Tinsman has proposed, some such system as this might be adopted by legislation, in one of our progressive states:

Let a properly qualified physician be appointed who will go from place to place in the state and lecture to parents on the conditions needed for the best rearing of children, prenatal and postnatal. Let every health officer be required to get from the obstetrician in every case of birth a full statement of the development of the child, including hereditary taints and apparent predisposition to disease, for record. Let each child be examined once a year and the condition reported. Let physicians be required to report all cases of venereal disease. This examining and reporting should be continued through life and the records should be as easily accessible as real estate records. Many fathers would probably object to the adoption of such a system for themselves, but, none should hesitate to secure the benefit of it for their children.

Illinois, New York and several other states have a special instructor in infantile paralysis, whose duty it is to hold clinics throughout the state instructing physicians and parents on the treatment needed by victims of this disease and its prevention. There can be no doubt that this is a wise use of public funds. Such a system as I am suggesting would save the state millions in a few years, by reducing crime, insanity, vagrancy and disease in general. There should be no delay in adopting it.

THOMAS J. ALLEN.

Eureka Springs, Ark.

THE HOME INFLUENCE

We went to the movies the other evening. Not that this is so very exceptional an occurrence, but, this particular instance stands out as an occasion when a picture was presented the action of which made one think.

The hero of the picture is a young man, the son of the owner of a string of de-

partment stores all over the country. Wife and daughter are social climbers, and son has gratified their aspirations by becoming engaged to a girl, a member of an old "aristocratic" family—whatever that may mean in our democratic country. The girl, however, evidently has entered into this arrangement under pressure, being dependent upon the good will of a wealthy aunt. She resents being "sold" to a son of the vulgar rich and is studiously indifferent, even rude to him and his family. When a yacht trip is arranged for her, her fiancé, Preston, refuses to join the party, and remains at home chewing the bitter cud of his reflections. Then things begin to happen.

Some time before, Preston had noticed, at the perfumery counter of his father's store, a pretty young girl who always seemed either very sad and unhappy or much dissatisfied with her lot. She and a neighbor's girl working at the same counter are shown on the screen to bring out the actual problem of the play. Linny, the sad girl, has a father who was injured in an industrial accident and is now a hopeless invalid, paralyzed, almost imbecile, requiring constant care that is not always pleasant. For instance, he slobbers while being fed. This may be accepted as a minor accident in a little baby; in a grown person, it easily becomes tragic. Linny's mother, one of the hustling kind, has forgotten that there is such a thing as happiness and ease. She is never seen with her sleeves turned down, never idle or resting; yet, her house is neither tidy nor cosy. The son, bitter, dissatisfied, has imbibed anarchistic views and is revolutionary in his hatred of the upper classes. He is a draftsman, a hard worker, and, in his way, very fond of his sister Linny. Altogether, it is not a happy home where Linny lives. The other girl, Mabel by name, is the daughter of a policeman living across the way. Her mother, stout, bustling, cheerful, keeps her little family happy and contented. While she has not time for much petting and fussing, her cheery greeting when the daughter returns is in sharp contrast with the sulky reception that Linny meets on her return from the store. Mabel's sweetheart, Dennis, is accepted by the parents as her suitor and, altogether, in this household everything is lovely.

While Preston is alone in town, he decides to have a good time. But, the man-

ner in which he goes about to get it is unusual. Chancing to see Linny while he is passing through the store he goes up to her counter and asks brusksly, "Have you ever had a good time?" then beats it. But, he waits for the girl outside, with his car. He pleads with her to let him take her out riding, and, arrived in the park, he begs her to let him give her the best time she ever had, every evening during the entire week. She is to decide each evening what she wants to do, and the only return he wants is, that she should enjoy herself hugely. Wait a minute, you blasé movies' fans! He does not give a knowing wink aside; he does not look wickedly and secretly pleased, manifestly anticipating the later accomplishment of his malign purpose, the ruin of this pretty, innocent girl. For a strange change, this young chap actually wants only to give the girl a rattling good time.

Impossible? My dear sir, or madam, is it impossible for young people to be together, very good friends indeed, without offending against moral precepts, even if the *covenances* may not be observed strictly? Is every young man a rotter, every young girl a possible vampire or willing victim of man's depraved sex-appetite? It makes little difference what the current run of vicious movies' pictures depicts, there are clean stories just as there are clean lives. It matters not what the *Valescas*, the Clara Kimball Youngs, the Dorothy Daltons and other actresses of the vampire type show, as long as we can have clean stories, entirely free from all suggestiveness, like those in which Mary Pickford, Marguerite Clark, and many other favorites play. And, the funny thing is, that these clean shows draw far greater crowds than those where the sign "Children Not Admitted" is so brazenly exhibited: and which insist on depicting the worst phases of life. Oh, of course, as "horrible examples." However, we digress.

Preston presses upon Linny a roll of bills, quieting her reluctance to accept them by assuring her that often he spends more for a single evening's entertainment, and she is going to give him six long joyous evenings. The girl evidently is to spend the money for pretty dresses, for, the next evening she comes out with a lot of boxes and packages. Now, the question arises. Where shall she dress? And Preston solves the difficulty by taking

Linny to his house and leading her to his mother's room, where she changes into her fine feathers. Then they start out on their adventure.

One evening the show, the next evening a cabaret, then a fine restaurant, and so on for the rest of the week until the last evening. Then Linny says that she just wants to pretend that she lives in this fine big house and owns all the beautiful and wonderful things that her poor little starved soul so greatly craves. But, poor Cinderella has not been able to pass five long evenings with Preston, being treated by him with consideration and deference, not being asked for any return, not even for a kiss, without falling in love with him. She is restless and unhappy and, finally the unhappy truth comes out: "You have been so good to me and now you are my whole life—I cannot go back to the old things; I cannot." Preston is thunderstruck. He realizes, too late, that he has not dealt fairly by this girl, who is a good girl. That he has aroused wishes and desires in her which cannot be gratified. Even when she leans against him in her grief, wanting to be comforted in his arms, he hesitates; but, finally he kisses her.

Every night, when Preston brought back Linny to her house, in his car, the neighbor policeman on his night beat has seen them. After four nights running, he takes the number of the car, and gives it to Linny's brother, whom he happens to meet. But, Linny had told her mother that she had an opportunity to do some night work, thus explaining her unusual absences from home; and the mother "needed the money," so, Linny was permitted to be out late. Now her brother confronted her with the damning fact of her being brought home in an expensive car. However, she counters by saying that she is doing work for Preston's mother, Mrs. Winfield, and is taken home by the chauffeur. Chancing, however, to read in an evening paper of the arrival of the Winfield party at Palm Beach, the brother suspects the worst and investigates, invading the Winfield house. He looks into the window just as Preston kisses his sister while she is held close in his arms. What else can he think but that she has been ruined by Preston? Furious,

he leaps into the room, and there ensues a bitter fist-fight between the two young men, in which Preston prevails.

Unfortunately, at that very juncture, the family return home, and the fat is in the fire. The engagement with the haughty young aristocrat is broken off, Preston is exiled by his father to the Chicago store, to work out his salvation. Poor Linny is not believed at home, but, is suspected of the worst. She finds out that her brother prepares to shoot Preston and overhears her mother insisting that he should give up this plan, because she means to levy blood-money on Preston's father, to pay for Linny's shame. In desperation, the girl escapes and wanders aimlessly for hours through the streets, when finally, in front of a brightly lighted restaurant, she sees Preston's well-known car. She hides nearby, and soon Preston is seen coming out of the place, listless, and drives off. Linny runs to meet the car; Preston fails to see her in time; she is run over; is taken to the hospital; and there she dies, after taking leave of the inconsolable Preston.

While, before her adventure with Preston, Linny always had been listless, dissatisfied in the store, making few sales and getting scant wages, when at home the unfriendly atmosphere had been oppressive, she, during those wonderful days, was bright and cheerful, her friendly and happy face attracted customers and she was slated for advancement, even the home surrounding no longer being able to dampen her freshened spirits. After the awful encounter between Preston and her brother and under the clearly expressed suspicion of wrong doing, Linny fell back into her indifferent ways; customers turned their backs upon her and dismissal stared her in the face.

Against this, there is her friend Mabel with her happy home. She is cheerful, bright, friendly. Not nearly as pretty as Linny, she is far more attractive (except during the brief interlude with Preston), a successful saleswoman, and will make a contented wife and mother.

The Moral: It is the influence of home-life that makes or mars many lives, not only of girls, but, also, of boys.



In the World War

The Spirit of '18.



The World Cry-
Food!
Cultivate *the* Soil.

UNITED STATES FOOD ADMINISTRATION

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS

An urgent and imperative appeal has just been issued by the Surgeon-General of the United States Army, for doctors for the Medical Reserve Corps.

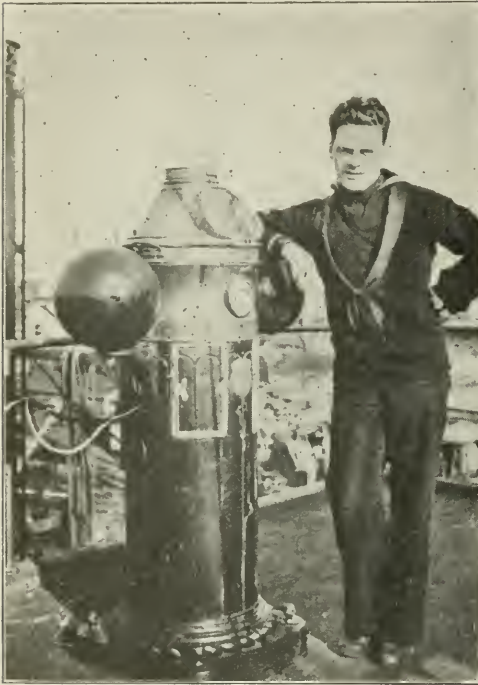
There are today 15,174 officers of the Medical Reserve Corps on active duty, and the Medical Department has reached the

its proportionate number of medical officers, and there are at this time on the available list of the Medical Reserve Corps an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but, of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and appeal from the Surgeon-General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the editor of this journal will advise you.

"STAND BEHIND THE BOYS"

How many doctors have applied this now very expressive phrase to themselves? There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight than the thought that if he



One of Our Own Boys in the Aero Service.

limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor between the age of 21 and 55 years who is physically qualified for service, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far, the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or fighting, phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service. Drafts of men will continually follow drafts, each of which will require



Laundry Work—Very Personal.

does suffer a casualty, he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends, who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy, and they will welcome your acceptance of a



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A French Red Cross Station in a Sylvan Setting.

commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people is, to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but, apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the editor of this journal will supply the necessary information.

Stand by our boys, your boys, their boys! Remember the gallant French in '76. The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.

The rapid expansion of the Army calls for a largely expanded Medical Reserve Corps. The Surgeon-General has issued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment. Apply for a commission today.

BOOKS FOR MEDICAL OFFICERS IN FRANCE

Within two days, we have received two appeals from members of the M. R. C.,

now serving in France, who informed us that they stand in great need of recent, up to date, and authoritative books far more than of the ordinary comforts and little luxuries that the homefolks like to send to their soldier sons, brothers, cousins, and friends, and many of which can now be bought in the canteens and other places.

They tell us that, owing to regulations, it has been impossible for the medical officers to carry medical books in their equipment and request that books of this nature be donated to the hospital-libraries abroad that already are in existence or are to be established.

Now, here is a suggestion. The need of our colleagues in France is particularly for the latest and best books on diagnosis, immunology, surgical treatment, preventive medicine. It will not do for any of us to hand out our own discarded old books—the very latest and best, only, are good enough and acceptable. So, let us pitch in and contribute a dollar or two apiece—if anybody insists upon giving more, he will not be blackballed. Then let us invest this money in those books that are called for; and there is no doubt but that the publish-

ers will be quite willing to furnish them at rock-bottom prices.

These books are to be sent to the hospital-libraries rather than to individual officers, for, by so doing, the benefit will accrue to a greater number of medical men and, indirectly, patients than would be the case if



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The Camp Laundry.

the books in question were sent to individuals. Our over-seas fund will be employed for this service as far as possible. Do you want to enlarge it, doctor?—Do!

HYDROGEN DIOXIDE AND ICHTHYOL FOR WOUNDS AND BLEEDING

Here is a suggestion that seems worth trying out in comparison with the numerous other remedies in vogue for the treatment of wounds; for, while the latest chlorine compounds at present are in the ascendancy, there presumably are circumstances—nature and location of a lesion and the individual constitution—in which one or other application, singly or in conjunction with something else, may prove superior or more desirable, not forgetting the question of availability or cost.

Reference here is to a short note published by Dr. J. Hundshausen, in the *Muenchener Medizinische Wochenschrift*, in which, briefly, he speaks enthusiastically about the virtues of a combination of solution of hydrogen dioxide and ichthyol, suitably diluted, and ordinarily in the following proportions: Commercial 3-per cent solution of hydrogen dioxide, 8 ounces; water, 8 ounces; mix, then dissolve in it, *without shaking*, 2 ounces of ichthyol-ammonium.

"This mixture," the author continues, "is a decided improvement upon plain peroxide solution, and it not alone splendidly promotes healing, but, also is a hemostatic, even remarkably so in epistaxis. Whether this liquid be sprayed or poured upon the wound or it is applied by means of compresses (cotton), one hardly can expect to see healing to proceed more beautifully than under the circumstances. There is very little noticeable frothing; evidence of hard-



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The Camp Laundry.

ly any oxygen being lost. (Of course, the liquid must not be agitated). In fine, no one who once has given this application a trial ever will return to pheol, or carbolic acid, for treating wounds."



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from May issue, page 402.]

I learn from such books as I have quoted from about as much about handling and treating sick people as I do from my medical books. How many doctors are there who are wise and unselfish enough to send a tired-out, overworked business man away for a long vacation, as this doctor did? There is too much of I-need-the-money spirit in present-day practice.

Here is a brief opinion of the young doctor across which I ran in "The Egotistical I," by Ellen Wilkins Tompkins:

"When Sellers did arrive, he proved himself a tyrant and painstaking enough to satisfy the critical eyes of Anne Senior. She only knows him slightly and prefers an older man, but, my old doctor of the lindens died a year ago and I have been clever enough not to get sick since that time. Of course, Sellers said it would have been better had I given up immediately. I expected this. It goes with the stock saying, 'The appendix burst the instant it was removed.' There are certain things that you learn intuitively, and one is, that a young doctor is a weighty individual and needs careful handling. I say, with bated breath, there is a deal to learn and unlearn in medicine. Sellers was tremendously in earnest and attacked my case in words four syllables long. After he had blown off his first steam, I said to him witheringly, 'I had no idea you were such a bully.'"

—

But, next to the doctor of the old school in "Beside the Bonnie Briar Bush," I have read nothing that presents the ideal physician so well as does the chapter on Doctor North in "Adventures in Contentment," by David Grayson. This book is well worth reading, and especially the entire chapter about Doctor North. I quote only a portion of it:

"So, Doctor North left his secret mark upon the neighborhood—as all of us do, for

good or ill, upon our neighborhoods, in accordance with the strength of that character that abides within us. For a long time, I did not know that it was he, though it was not difficult to see that some strong good man had often passed this way. I saw the mystic sign of him deep-lettered in the hearthstone of a home; I heard it speaking bravely from the weak lips of a friend; it is carved in the plastic heart of a boy. No, I do not doubt the immortalities of the soul; in this community, which I have come to love so much, dwell more than one of John North's immortalities—and will continue to dwell. I, too, live more deeply because John North was here.

".....I heard again the stories of how he drove the country roads, winter and summer, how he had seen most of the population into the world and had held the hands of many who went out! It was the plain, hard life of a country doctor, and, yet, it seemed to rise in our community like some great tree, its root deep buried in the soil of our common life, its branches close to the sky. To those accustomed to the outward excitements of city life, it would seem barren and uneventful. It was significant that the talk was not so much of what the Doctor did as of *how* he did it, not so much of his actions as of the natural expression of his character. And, when we come to think of it, goodness is uneventful. It does not flash, it glows. It is deep, quiet, and very simple. It passes not with oratory, it is commonly foreign to riches, nor does it often sit in the places of the mighty, but, may be felt in the touch of the friendly hand or the look of a kindly eye.

"Outwardly John North often gave the impression of brusqueness. Many a woman going to him for the first time and until she learned that he was in reality as gentle as a girl was frightened by his manner. The country is full of stories of such encounters. We laugh yet over the adventure of

a woman who formerly came to spend her summers here. She dressed very beautifully, and was 'nervous.' One day she went to call on the Doctor. He made a careful examination and asked many questions. Finally he said, with portentous solemnity:

"Madam, you're suffering from a very common complaint.' The Doctor paused, then continued impressively:

"You haven't enough work to do. This is what I would advise. Go home, discharge your servants, do your own cooking, wash your own clothes, and make your own beds. You'll get well.'

"She is reported to have been much offended, and, yet, today there was a wreath of white roses in Doctor North's room sent from the city by that woman.

"If he really hated anything in this world, the Doctor hated whippersnappers. He had a deep sense of the purpose and need of punishment, and he despised those who fled from wholesome discipline. A young fellow once went to the Doctor—so the story goes—and asked for something to stop the pain.

"Stop it!" exclaimed the Doctor; 'why, it's good for you. You've done wrong, haven't you? Well, you're being punished: take it like a man. There's nothing more wholesome than good honest pain.'

"And, yet, how much pain he alleviated in this community—in forty years!

"The deep sense that a man should stand up to his fate was one of the keynotes of his character; and the way he taught it, not only by word, but, by every action of his life, put heart into many a weak man and woman. Mrs. Patterson, a friend of ours, tells of a reply she once had from the Doctor, to whom she had gone with a new trouble. After telling him about it, she said:

"I've left it all with the Lord.'

"You'd have done better,' said the Doctor, 'to keep it to yourself. Trouble is for your discipline; the Lord doesn't need it.'

"It was out of his wisdom that he was always telling people what they knew, deep down in their hearts, to be true. It sometimes hurt at first, but, sooner or later, if the man had a spark of real manhood in him, he came back and gave the Doctor an abiding affection.

"There were those who, though they loved him, called him intolerant. I never

could look at it that way. He *did* have the only kind of intolerance that is at all tolerable, and that is the intolerance of intolerance. He always set himself with vigor against that unreason and lack of sympathy which are the essence of intolerance; and, yet, there was a rock of conviction on many subjects behind which he could not be driven. It was not intolerance; it was with him a reasoned certainty of belief. He had a phrase to express that not uncommon state of mind, in this age particularly, which is politely willing to yield its foothold within this universe to almost any reasoner who suggests some other universe, however shadowy, to stand upon. He called it 'a mush of concession.' He might have been wrong in his convictions, but, he, at least, never floundered in a 'mush of concession.' I heard him say once:

"There are some things a man can't concede, and one is, that a man who has broken a law, like a man who has broken a leg, has got to suffer for it.'

In closing, I can not refrain from calling your attention to the following conversation between Emile Souvestre—author of "An Attic Philosopher"—and a doctor, which was written some seventy-five years ago. If the up to date doctor had some of the common sense and honesty of M. Lambert, Souvestre's physician, I believe that there would not be so many people going out after new cults of healing as there are today. There is too much commercialism in the practice of medicine, I was about to say, also, too much science and not enough of the humanities. But, I will not philosophize any more or express further opinion. I have been interested in this sketch, and I give it to you, hoping you will find it as interesting as I do:

"I was wakened by a hand taking mine, and opening my eyes, I recognized the Doctor. After having felt my pulse, he nodded his head, sat down at the foot of the bed, and looked at me, rubbing his nose with his snuffbox. I have since learned that this was a sign of satisfaction with the Doctor.

"Well! so we wanted old Snubnose to carry us off?" said M. Lambert, in his half-joking, half-scolding way. 'What the deuce of a hurry we were in! It was necessary

to hold you back with both arms, at least!"

"Then you had given me up, Doctor?" asked I, rather alarmed.

"Not at all," replied the old physician. "We can't give up what we have not got; and I make it a rule never to have any hope. We are but instruments in the hands of Providence, and each of us should say, with Ambroise Paré, 'I tend him, God cures him.'"

"May He be blessed, then, as well as you," cried I; "and may my health come back with the new year!"

"M. Lambert shrugged his shoulders.

"Begin by asking yourself for it," resumed he, bluntly. "God has given it you, and it is your own sense, and not chance, that must keep it for you. One would think, to hear people talk, that sickness comes upon us like the rain or the sunshine, without one having a word to say in the matter. Before we complain of being ill, we should prove that we deserve to be well."

"I was about to smile, but, the Doctor looked angry.

"Ah, you think that I am joking," resumed he, raising his voice; "but, tell me, then, which of us gives his health the same attention that he gives to his business? Do you economize your strength as you economize your money? Do you avoid excess and imprudence in the one case with the same care as extravagance or foolish speculations in the other? Do you keep as regular accounts of your mode of living as you do of your income? Do you consider every evening what has been wholesome or unwholesome for you with the same care that you bring to the examination of your expenditure? You may smile; but, have you not brought this illness on yourself by a thousand indiscretions?"

"I began to protest against this and asked him to point out these indiscretions. The old doctor spread out his fingers and began to reckon upon them one by one.

"*Primo*," cried he, "want of exercise. You live here like a mouse in a cheese, without air, motion or change. Consequently, the blood circulates badly, the fluids thicken, the muscles, being inactive, do not claim their share of nutrition, the stomach

flags, and the brain grows weary.

"*Secundo*, irregular food. Caprice is your cook; your stomach a slave who must accept what you give it, but, presently takes a sullen revenge, like all slaves.

"*Tertio*, sitting up late. Instead of using the night for sleep, you spend it in reading; your bedstead is a bookcase, your pillows a desk! At the time when the wearied brain asks for rest, you lead it through these nocturnal orgies, and you are surprised to find it worse for them the next day.

"*Quarto*, luxurious habits. Shut up in your attic, you insensibly surround yourself with a thousand effeminate indulgences. You must have list for your door, a blind for your window, a carpet for your feet, an easychair stuffed with wool for your back, your fire lit at the first sign of cold, and a shade to your lamp; and, thanks to all these precautions, the least draught makes you catch cold, common chairs give you no rest, and you must wear spectacles to support the common light of day. You have thought you were acquiring comforts, and you only have contracted infirmities.

"*Quinto*,

"Ah! enough, enough, doctor!" cried I. "Pray, do not carry your examination further; do not attach a sense of remorse to each of my pleasures."

"The old doctor rubbed his nose with his snuffbox.

"You see," he said, more gently, and rising at the same time, "you would escape the truth. You shrink from inquiry—a proof that you are guilty. *Habemus confitentem reum!* But, at least, my friend, do not go laying the blame on Time, like an old woman."

"Thereupon he again felt my pulse and took his leave, declaring his function was at an end, and that the rest depended upon myself.

"When the doctor was gone, I set about reflecting upon what he had said. Although his words were too sweeping, they were not the less true, in the main. How often we accuse chance of an illness, the origin of which we should seek in ourselves! Perhaps it would have been wiser to let him finish the examination he had begun."

[To be continued.]

Among the Books

HARRISON: "TREATMENT OF SYPHILIS"

The Treatment of Syphilis: A Critical Review. By L. W. Harrison, D. S. O. New York: Oxford University Press. 1917. Price, \$1.00.

This pamphlet of 70 large-octavo pages of text and over 3 pages of literary references presents an able discussion of the various remedies employed in the treatment of syphilis, the drugs successively taken up being arsenic, antimony, silver, mercury, iodine, sulphur, and iron compounds. As is but natural, the discussion of the arsenical compounds, including salvarsan and its congeners, occupies the principal space. In addition to the theoretical considerations, valuable practical suggestions are presented for the intravenous and other forms of administering the different remedies discussed. The pamphlet is useful for those interested in the treatment of syphilis, and can be warmly recommended.

DORLAND: "MEDICAL DICTIONARY"

The American Illustrated Medical Dictionary. Pronunciation, Derivation, and Definition. Including much collateral information of an encyclopedic character. By W. A. Newman Dorland, M. D. Ninth Edition, Revised and Enlarged. Philadelphia: The W. B. Saunders Company. 1917. Price \$4.50.

Theoretically, a book should not be reviewed until the reviewer has familiarized himself with its contents by careful study. Only then is it possible to formulate a just opinion. As a matter of fact, such a desirable procedure is possible only in the case of relatively few new books, and reviewers as a rule must content themselves with discovering the author's main arguments, and the manner in which he supports them, in order to form an opinion as to the value of the new book.

However, in announcing a new edition of this medical dictionary, even though it be

as well and favorably known as Dorland's, it seemed advisable to postpone discussion until the work had been subjected to continued consultation during a number of months. The result of the somewhat searching test has been that this new edition of the American Illustrated Medical Dictionary has not failed us (with one single exception) in any case in which its resources were laid under contribution.

The dictionary is well up in the newest medical terms, including those that have become current since the beginning of the war. Some new words we miss, but, they were not evolved until after the publication of the dictionary, so that no blame is attached. Moreover, the one exception mentioned above was that of a word that could not be found in any of the dozen or so medical and general dictionaries on our bookshelves, and ultimately was exposed as a typographical error.

Dorland's Medical Dictionary doubtlessly is one of the best, if not, indeed, standing at the very head. The arrangement and mechanical makeup are of such a nature as to make consultation easy. The definitions are acceptable, while the various minutiae of spelling, derivation, capitalizing, and so on, are correct throughout. The illustrations undoubtedly add to its value. Altogether, the reviewer finds Dorland a never failing source of comfort in the rather strenuous demands that he makes upon it. Therefore, he does not hesitate to recommend it cordially to his brother physicians.

GREENWOOD: "SCOPOLAMINE-MORPHINE"

Scopolamine-Morphine: Semi-Narcosis During Labor. By Wm. Osborne Greenwood, M. D., B. S. London: Oxford University Press. 1918. Price \$2.00.

A pleasing innovation in the title of this book is the omission of the objectionable term "twilight sleep"; scopolamine-morphine narcosis neither being an actual sleep nor can it be described by that ques-

tionable qualification twilight sleep; it is rather, as the author indicates, a semi-narcosis.

The author points out that no amount of criticism thus far bestowed upon this method of making labor easier can negative the excellent results that have hitherto been obtained, and that can be obtained. Much of this criticism has been based, as he points out, upon faulty or careless technique or upon preconceived adverse opinion. It appears conclusively from a study of the author's investigations, as laid down in this little book, that this method of inducing analgesia during labor possesses great possibilities and that in many instances it is much to be preferred to chloroform-narcosis, over which it possesses advantages with regard both to mother and child.

Doctor Greenwood's treatise shows much personal and original work and thanks are due him for the manner in which he has established the value and merits of the method under consideration. This, by the way, cannot hold claim to being designated as the "Freiburg method," since it had been largely employed in practice in the United States years before Gauss, in Freiburg, secured his peculiar notoriety.

MACLEOD: "BURNS"

Burns and Their Treatment: Including Dermatitis From High Explosives. By J. M. H. Macleod, M. A., M. R. London: Oxford University Press. 1918. Price \$2.00.

The author confesses frankly that it was to extend his own knowledge on the treatment of burns and of dermatitis due to the making and handling of high explosives that the manuscript for the present book came to be written. He well describes the revolution which the treatment of burns has undergone during the last few years. The old-fashioned methods with greasy applications and occlusive dressings have given way to more rational and "open" methods of treatment, whereby dressings are largely avoided and the terrible ordeal of pain associated with their removal rapidly is becoming a thing of the past.

The various methods of treating burns are considered fairly and with sufficient detail to be serviceable to the practitioner. Instead of the simple classification into

three degrees that is current in the United States, the author has adopted the classification of Dupuytren, who differentiates six degrees. This, though, is a detail that is of minor bearing. Of greater importance is the description of the various forms of burns, according to cause, namely, heat (moist and dry), electricity, lightning, x-rays, chemicals, et cetera. It is of interest to us that the treatment of burns by the open method, that is, under a natural scab and by the method of healing under an artificial scab, by the paraffin method, is strongly endorsed by the author. For moist dressings, he recommends the employment of the Carrel-Dakin method of treating wounds. Several chapters are supplemented by fairly complete literary references.

OTIS: "PULMONARY TUBERCULOSIS"

Pulmonary Tuberculosis: A Handbook for Students. By Edward O. Otis, M. D. Boston: W. M. Leonard. 1917.

This little manual of 206 pages of text is intended, primarily, for students of the third and fourth years, to be used in connection with clinical work. However, the general practitioner likewise will find it instructive and will derive from its study much sound advice and aid in the management of his tuberculous and consumptive patients.

The author stresses the important truth that it is not so much the tuberculosis, or consumption, that must be treated, as, rather the patient who is tuberculous or consumptive; the necessity of individualizing being greater, perhaps, in tuberculosis than in any other disease, for successful treatment.

As to the methods of treatment outlined by the author, they are those called "general" and symptomatic, since in his opinion, probably no specific ever will be discovered. This is very true, if it is considered that clinical tuberculous disease is far more than the result of an infection with the tubercle-bacillus; that it is, in the words of Richard Morton, "a consumption of all muscular parts of the body," the cause of which is complex. The peculiarity of this affection, through which every organ and every function of the body becomes impaired, is responsible for the need of careful individualization and of general methods of treat-

ment by which the general resistance and functioning-power of the organism is restored.

These methods of treatment are outlined in Doctor Otis' book in a manner that renders it a useful guide for the practitioner. The author's wide experience with tuberculous patients has enabled him to select the salient clinical features and the best methods of treatment in a highly acceptable manner and to give his book the personal and authoritative touch that can come only from intimate knowledge.

PAGE: "AVIATION-ENGINES"

Aviation-Engines: Their Design, Construction, Operation and Repair. By Lieut. Victor W. Pagé, A. A. A. C., U. S. R. New York: The Norman W. Henley Publishing Company. 1918. Price \$3.00.

Physicians who are attached to the Aero Service of the United States Army, naturally, must be interested in the construction of flying machines, and may find much serviceable information in the pages of this book.

WINSLOW: "PREVENTION OF DISEASE"

The Prevention of Disease: A Popular Treatise. By Kenelm Winslow, B. A. S., M. D. Illustrated. Philadelphia: The W. B. Saunders Company. 1916. Price \$1.75.

This book is not a record of the progress in preventive medicine. It is a detailed practical guide for the layman, that he may avoid the various diseases described in it.

Since the inception of preventive medicine, by Jenner, in 1796, more than one hundred years passed before the impetus given by the originator of protective vaccination was taken up and developed further. However, during the opening of the present century, the occurrence of epidemics of typhoid fever was made preventable by protective vaccination according to Almroth Wright; the prevention of malaria and yellow-fever became possible through the researches, largely, of medical officers of the U. S. government services; so that actually a new era in the accomplishments and aims of medicine was opened up.

The author of this practical and popular treatise teaches conservation of health and prevention of disease, in a manner that is

in keeping with actual knowledge and free from faddism. His book may well be given into the hands of intelligent laymen; but, it likewise may be read with profit by the physician himself, if he wishes to prepare himself for giving instruction in health-matters.

DYKE'S "AUTOMOBILE AND GASOLINE ENGINE ENCYCLOPEDIA"

Dyke's Automobile and Gasolin-Engine Encyclopedia. Seventh edition, revised and enlarged. Containing 515 charts, inserts, dictionary, index, and supplements on the Ford, Packard and on airplanes. Treating on the construction, operation, and repairing of automobiles and gasoline-engines. Also trucks, tractors, airplanes and motorcycles. By A. L. Dyke, E. E. St. Louis: A. L. Dyke, publisher. 1918. Price \$3.50.

This latest issue of Mr. Dyke's "Automobile and Gasolin-Engine Encyclopedia" presents a further improvement over preceding publications of this enthusiastic automobile-expert. The book contains in encyclopedic form information on every question that may come up for solution or that the owner of a car may wish to have answered. It gives a guide for operating and taking care of the car and also enters into the matters of insurance, license, and laws as they refer to automobiles. Undoubtedly, a book like this must be welcomed by automobile owners and will repay frequent consultation.

BALLENGER AND WIPPERN: "EYE, EAR, NOSE, AND THROAT"

Eye, Ear, Nose, and Throat: A Manual for Students and Practitioners. By Howard Charles Ballenger, M. D., and A. G. Wipperrn, M. D. New second edition, thoroughly revised. Illustrated with 180 engravings and 8 colored plates. Lea & Febiger. Philadelphia: 1917. Price \$3.50.

This book offers an efficient guide for the treatment by the general practitioner of the special affections dealt with. It is necessary for the general practitioner to know when he may attend with safety to patients complaining of diseases of this nature, and when to refer them to specialists. The information presented will guide the general practitioner in deciding whether to treat or not to treat, and how to treat.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6360.—“Aneurysm of Heart.”—On the last page of *CLINICAL MEDICINE*, Query 6360, Dr. R. S. C., of Arkansas, asks for help in the treatment of aneurysm of aorta. I wish to call the Doctor's attention to Doctor Abrams' book, “Spondylotherapy,” page 88 and in other places, as possibly suggesting a means for relieving his patient. The book is pub-

lished by The Philopolis Press, Lincoln Building, San Francisco, California.

Personally, I have not had occasion to try this treatment, but, from good results obtained by percussion in other diseases, I am convinced it will prove helpful here, too.

C. S. COPE.

Detroit, Mich.

Queries

QUERY 6380.—“A Peculiar Case of Arsenical Poisoning.” J. A. P., Minnesota, reports the case of C. P., male, age fifty-two, who, on October 14, last, took a teaspoonful of paris-green in water and then drank a pint of whisky. “The whisky kept him from complaining until about five hours after he took the poison so that, when seen, much of it had been absorbed. He was then in collapse, cold, pulseless, and was vomiting; the bowels also had moved. He was in a stupor. Later, anuria and anorexia set in, while vomiting continued for several days. There seemed, however, to be no pain. The skin was dry, with a papular eruption; panophthalmitis developed, with destruction of one eye. Almost constant delirium and talking irrationally has been present since a few days after the poisoning; that is, when he does not sleep. At first, the delirium was active. The man is now extremely emaciated, although he eats enough and has no trouble in digesting his food. Kidneys and bowels appear to be acting normally, and his appetite is good, but, he becomes more emaciated and still is delirious now six weeks after he took the poison.”

Our correspondent wants to know the cause of the continued delirium and what

treatment he can administer, although aware that the prognosis is, naturally, unfavorable.

Considering that this man took a teaspoonful of paris-green (copper acetoarsenite), followed this up with a pint of whisky, then remained five hours without treatment, we must concur in your prognosis and only can express our wonder at the fact that the man still is alive today. There can be little doubt that the coma and delirium may be regarded as arsenical encephalopathy, such cerebral manifestations, together with neuroretinitis, convulsions, hemiplegia, amaurosis, hysteria, and insanity, having been reported as occurring, not alone in lead-poisoning, but, in arsenic-poisoning as well. As you are aware, if a large amount of arsenic is absorbed, the anterior horns of the spinal cord are affected.

In this case, you have the typical anemia, loss of flesh and strength, and cerebral symptoms; however, you do not mention the existence of paralysis and general neuritis; we, naturally, should expect more or less pronounced cutaneous symptoms, besides, also, the presence of albumin and casts, with perhaps traces of blood, in the urine. A thorough analysis of the latter

and a careful examination of the blood ought to prove interesting.

Frankly, we can not see that very much can be done, beyond trying to hasten elimination of the arsenic by the use of potassium iodide and purgatives, to allay gastrointestinal irritation, and to maintain nutrition in every possible way.

Personally, we should be inclined to put the patient in wet packs every two or three days, wash out the bowel frequently, and give large quantities of some such demulcent beverage as barley-water. Milk and fatty foods, of course, should not be allowed.

We hope that you will keep us informed of the progress of this case.

QUERY 6381.—“Miners’ Pink Eye.” R. R. S., Oklahoma, writes: “Please tell me how to treat what the miners in lead and zinc mines call pink-eye. The trouble comes quickly to those working underneath the ground, and some of the mines are worse than others. The conjunctivas become congested and photophobia is marked; the pupils are small, but, respond to light; there is inability to raise the eyelids and a feeling of sand in the eye; there is a very slight pus formation. Would suprarenal extract be of use?”

The condition you have to deal with—that is, in the case of miners working in lead and zinc mines—is a somewhat peculiar one. However, we believe, that it will yield most readily if borated petrolatum be applied to the conjunctival sac, after irrigation with some such solution as this: Boric acid, grs. 10; zinc sulphocarbolate, grs. 2; hydrastine hydrochloride, gr. 1-50; distilled water, ozs. 2. We should be a little cautious about using suprarenal extract.

However, we are inclined to believe that those subject to this peculiar form of conjunctival congestion would suffer infinitely less if a small quantity of borated petrolatum were inserted into their eyes before their entering the mine or, at least, at the first sign of irritation. We assume, from the facts presented, that the men’s eyes are not protected.

QUERY 6382.—“Treatment of Epithelioma with Arsenical Paste.” W. M. B., Idaho, wishes to know (1) how he may tell, after using Marsden’s paste on an epithelioma on

the face, that it has killed the growth; (2) the best method of after-treatment; (3) how soon the wound should heal; (4) whether a second application of the paste should be made if the first seems not to have been effectual, and, if so, how soon?

It is impossible to judge whether one application of Marsden’s paste or any arsenical paste will thoroughly destroy epithelioma. However, in the ordinary form of epithelioma of the face, the tendency is, to spread horizontally, so that it is well to initiate treatment by curetting the edges with a sharp spoon, thus preparing the way for the application of the caustic. The paste should then be packed into the wounds made by the curet and care taken to have it penetrated deeply beneath the skin, if the latter is undermined. If the ulcer is not over an inch in diameter, the paste may fill the space level with the skin. Should there be no cavity, a reasonably thick layer of paste is spread over the part to be destroyed and a much thinner layer spread over the surrounding skin for at least a fourth of an inch distant from the sore.

Some practitioners prefer to apply Marsden’s paste on a piece of muslin or linen which has previously been carefully adapted to the affected area. The plaster should remain adherent for twelve, twenty-four or thirty-six hours, as may be indicated by the pain, intensity of reaction or the degree of destruction considered requisite. In all cases, the after-treatment consists in the application of soothing and antiphlogistic remedies.

As you are aware, arsenic exerts a selective influence upon epitheliomatous and other low-grade tissue and, if properly applied, Marsden’s paste will almost invariably destroy superficial growths.

It is impossible to say just how long healing will take, but, under basilicon or similar ointment dressings, the slough becomes detached, as a rule, in a week or ten days. Healing, thereafter, progresses as in any ordinary ulcer. Occasionally, pinpoint skin grafts may be applied with advantage.

Bear in mind that arsenic works most satisfactorily upon ulcerating lesions and on cancers of the embryonal type; usually healing is complete in four or five weeks.

The present writer has been in the habit, upon removal of the plaster, of applying carefully prepared poultices or kaolin paste. After the slough separates, if any cancer-

ous tissue remains or if the hard nodular base or margin remain unaffected, a second application of the paste may be necessary. It is safe to state that, when all cancerous tissue has been destroyed, healing will occur without interruption under a simple dressing.

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 QUERY 6383.—“Tired and Tender Feet.” M. F., Michigan, asks what is the best remedy for tired and tender feet.

It is not an easy matter to prescribe off-hand for tired and tender feet.

In the first place, so-called tired feet may be due to the existence of flat-foot, circulatory disturbance, malaria or a neurosis. The condition frequently is present in those of impaired vigor, especially after some such debilitating disease as influenza.

There is little question but that in obscure cases of long standing systemic treatment is necessary. In every case the condition of the body chemistry should be ascertained.

A well-fitting shoe should be worn and the patient change socks once or twice a day. It is a very excellent idea for him to have two pairs of shoes which should be worn on alternate days. The feet may be bathed, preferably in cold water, morning and night. It is an excellent plan to add a little alum; in most cases, epsom-salt solution, carbolated (epsom salts, oz. 1, water, qt. 1, carbolic acid, drops 10), more fully meets the requirements.

A dusting powder consisting of three parts salicylic acid, ten parts starch, and eighty-seven parts powdered soapstone, will check excessive perspiration and prevent chafing. Another very excellent formula is sodium salicylate, grs. 30, potassium permanganate, dr. 1, bismuth subnitrate, oz. 1 1-2, boric acid q. s. ad oz. 3, which should be dusted on the feet and into the socks every morning.

In simple cases, the patient should receive some such tonic as the triple arsenates with nuclein.

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 QUERY 6384.—“Otitis, Otagia.” W. E. A., New York, wishes to know the most effective treatment for earache.

As you will readily understand, it is absolutely essential that the cause of otalgia be discovered and that treatment, to be effective, must be based upon an understanding of such basal conditions. As the years

pass, the present writer is less and less inclined to employ oleaginous preparations, finding, in obscure cases, the instillation of a few drops of atropine or cocaine solution infinitely preferable. A 2-grains-to-the-ounce solution of atropine may be employed, while any solution of cocaine should not exceed 4 per cent.

The laity, as you may be aware, place a great deal of dependence upon the application of a hot baked onion. This may not appear to the scientific practitioner as a really useful procedure, still, in practice, it proves extremely efficacious, giving much better results, as a rule, than poultices.

A very good, generally applicable preparation for use in ordinary earaches consists of cocaine, grs. 6; tincture of opium, drs. 2; glycerin, drs. 2. A drop of this mixture on a small pledget of absorbent cotton should be placed in the auditory canal, preferably after thorough irrigation. Externally, that is, behind the ear and about the tragus, apply some such ointment as: Guaiacol, grs. 40; Methyl salicylate, grs. 40; menthol, grs. 3; and lanolin and petrolatum, equal parts to make oz. 1.

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 * QUERY 6385.—“Senile Incontinence.” W. T., New Mexico, writes: “Very little is said in text-books about weakness of the bladder or sphincter in old people, causing difficulty to retain urine and frequent getting up, at night, to urinate. What is the best remedy for this condition, where the general health is otherwise good?”

As you are aware, incontinence of urine in the aged is generally the result of atony of the vesical sphincter. Small doses of hyoscyamine and strychnine valerate, cautiously alternated, in particularly stubborn cases, with sodium cantharidate, usually prove effective. Strychnine valerate, gr. 1-64 and hyoscyamine, gr. 1-250, may be given before dinner, supper and at bedtime, with cantharidin, gr. 1-5000, every hour for three doses before retiring. Be very sure, though, that there is no prostatic disorder.

Arbutin is regarded by many clinicians as virtually “specific” in senile incontinence; still, in many cases marked by atony of the vesical sphincter, the addition of strychnine and hyoscyamine is almost essential.

Delphinine is another drug which has been highly lauded by many competent ob-

servers. Delphinine acts upon the central nervous system. It should rarely—if ever—be used during the persistence of an acute inflammatory condition.

Some observers report that this alkaloid checks mucous, or mucopurulent discharges, and, that it exerts in a somewhat less degree a tonic influence upon the vesical mucosa and the kidneys. In full doses, it produces vomiting, giddiness, and convulsions. In reasonably full doses, it may act as a laxative; but, more often it promotes diuresis and occasions feelings of heat and tingling in various parts of the body.

The eclectics regard staphisagria (larkspur) as a remedy for chronic inflammation and atony of the renal and reproductive organs. Scudder, for instance, considers staphisagria a specific for irritation of the genitourinary apparatus, especially in chronic irritation of the neck of the bladder associated with temporary enlargement or irritation of the prostate. Locke says that it gives marked relief in urinary incontinence of old men, with vesical and prostatic irritation, frequent teasing or urgent desire to urinate. In our own hands, however, eupurpurin and arbutin, with small doses of berberine, have given better results in such conditions.

The usual dose of delphinine is 1-128 grain, every thirty to sixty minutes for a few doses, to effect, then every one to three hours, as may be required to maintain the impression. Bear in mind that individual susceptibility varies greatly. Patients receiving delphinine should be put on bland or mucilaginous beverages, as, barley-water.

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 QUERY 6386.—“Sexual Neurasthenia?” J. C. N., Tennessee, forwards a specimen of urine for examination, with the patient's own description of his symptoms, and asks diagnostic and therapeutic comment. The patient writes:

“I am thirty-one years old, weigh 137 pounds, 5 feet 10 inches high. Have been ailing for the last eight years. Have extreme tenderness over the region of the kidneys. Kidneys pain me all the time and back hurts all the time. Urine scanty and between times of urination the urethra pains and burns and before the first urination of a morning there is a thick yellow discharge. When lifting or straining hard, the testicles swell up and they will ache and have a burning sensation. Eyes are weak. Can't

read long without getting headache. Have poor appetite. Am thin in flesh and ache all over all the time. When I walk or strain, the cords leading to the bladder on each side swell up and get awfully sore and seem to be as large as my little finger. When I sit or stoop over any length of time, my breast nearly kills me, pains and aches, and pains me so. I am short of breath, nervous, and irritable with myself and everybody else at times.”

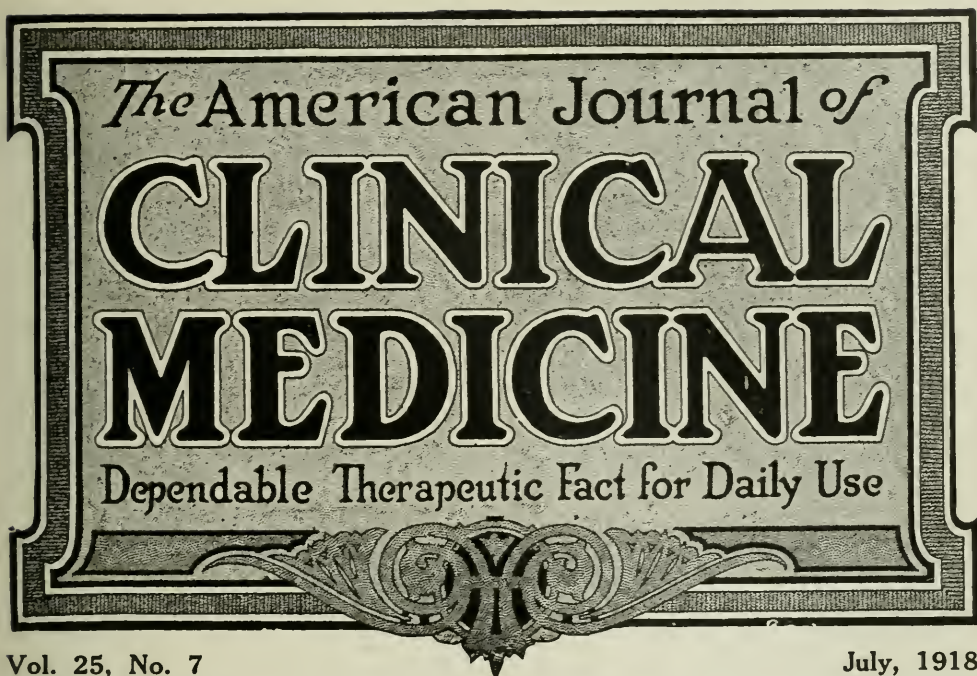
Examination of the urine reveals colon-bacilli, staphylococci, and a few streptococci, with other evidences of an infection of the genitourinary tract. Therefore, we certainly should administer an autogenous bacterin.

Unfortunately, this man would seem to have been reading “lost manhood” books or medical almanacs. In the first place, what “cords” are there “leading to the bladder” which “swell up and get awfully sore,” and why should “sitting or stooping over” produce a pain in the breast, which “nearly kills” him? Were this writer in charge of this individual, he would suspect him very strongly of undesirable practices, and he believes that kindly cross-questioning will enable you to reach a diagnosis easily.

However, it is not fair for us, as physicians, to belittle offhand the many distresses that so-called neurasthenics suffer from, and it is a question whether we really are yet able to recognize clearly the symptoms of certain neuroses, which can render life miserable.

This man is of under-weight, undoubtedly has a vesiculitis and possibly an epididymitis, and, if you will examine the lower bowel, you may find quite an extensive pus-pocket or even a fistula. It would be an excellent plan to make a very thorough physical examination and send a specimen of the urethral discharge to a competent pathologist.

In the meantime, secure thorough elimination, give him a good reconstructant tonic, have him wear a suspensory bandage, pass sterile cold steel sounds every second or third day (increasing one size at each sitting); also, if you have a wall-plate, try spinal faradization, applying one pole over the pubes and perineum and the other over the sacral region. It may be necessary to treat locally an erosion in the deep urethra. It is essential to find out definitely the exact condition of the patient.



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Endocarditis—What's Back of It?

DOCTOR GOLDSTEIN'S article in the February number, page 121, is one that well illustrates the value of the researches concerning rheumatism that have been made during the past ten or twelve years. His patients exhibited the ordinary sequence—tonsillitis, chorea, rheumatism, endocarditis. But, while we recognize this as an ordinary sequence, the profession does not as yet appear to be sufficiently aroused to the importance of starting treatment promptly upon the appearance of the first member of the series. For, if we begin by curing the tonsillitis, the chain is broken. We may go a step further and say that, if we cure the sore throat in its incipiency, there will be no tonsillitis; and, the malady begins with sore throat. Owing to exposure to cold and wet, fatigue, privation, missing of regular meals, partaking of alcohol to excess, or subjection to any other excess by which vitality is depressed to a certain point, swarms of microorganisms are afforded the opportunity to find lodgment in the mucous membrane of the throat.

Then is the time for most efficient intervention. Don't wait until the disease-

producers have penetrated into the substance of the gland and entrenched themselves; dug in, in fact, too deeply to be affected by topical applications. When the first burning and other irritation of any of the nasal or pharyngeal surfaces are experienced, apply promptly and effectively an antiseptic. Of course, we have our preference, and this is for chlorazene, although we have also succeeded with other antiseptic agents before the discovery of the former. At any rate, a few such applications, an hour or two apart, will, in the vast majority of cases, stop the attack in the earlier stages. Even in inveterate rheumatic cases, where patients had been subjected to repeated attacks of this sort, success has been secured by supplying the patient with the antiseptic agent and instructing him to use it at the first evidence of faucial irritation.

This has a bearing also upon the recent views regarding the role played by focal infection in the occurrence of endocarditis as well as of other febrile diseases of bacterial origin. A person with a focal infection localized, say, in the tonsils, not only

is liable to be himself subject to various ailments and disabilities, but, he also is a carrier and may endanger the health of those with whom he comes in intimate contact. Here is, therefore, an additional reason for persistent treatment of tonsillitis, even though it be not in an active stage.

Another point is suggested in Doctor Goldstein's cases, and that is, that the modern remedies for rheumatism are not always as successful in preventing endocarditis as was Fullers' old alkaline treatment.

For some years, we used formaldehyde as an antiseptic, but, have recently learned to look upon it with strong suspicion and would, certainly, not recommend it as a household remedy. The latter should be both effective and harmless, and for this reason we would strongly recommend the popularization of the new antiseptic.

For the treatment of carriers, we should prescribe a spray of chlorazene of the strength of 1 in 1000, used at least every three hours during the waking period and as much oftener as possible. Morning and evening, apply, with a nebulizer, a 1-percent solution of dichloramine-T in chlorcosane. If these remedies are kept in the house, with the understanding that they be employed as soon as any sign of nasal or pharyngeal irritation is manifested, a very great deal of sickness can be prevented. Besides this, every mother should be taught to take a look at her children's throat, morning and evening, especially if throat-affections are prevalent, and to call in the physician if a manifest irritation does not yield promptly to the simple treatments that she can apply.

Life is full of golden opportunities for doing what we do not want to do.

UNIVERSAL MILITARY TRAINING

Just now, of course, we all feel quite certain that we shall never again be caught napping in the face of a great national crisis, as we were in this one; just as everybody who is caught in a thundershower vows that he will never again go out without an umbrella. But, the truth is that, as soon as the sun comes out again and the sky is bright overhead and the ground is dry underfoot, everybody forgets there ever was such a thing as a storm and with cheerful thoughtlessness takes a chance on the

next downpour. And, by the same token, this same everybody will drop back into the old state of happy-go-lucky complacency about the national safety as soon as the present war is over, unless someone makes it his special and persistent business to keep the spirit of preparedness alive and sees to it that some powerful machinery is set in motion to enforce its application.

We think we won't, now; while the disaster which our carelessness precipitated is still upon us. But, there will come a time when the burden will be lifted and in our thoughts and talk and activities thrice-welcome peace will take the place of hideous war, and then, in our great relief, we shall wipe the sweat from our brow and take a long breath and say: "Whew! Thank heaven, that nightmare is over! Now let's forget about such things as war, and take a rest and enjoy life for a while!" That's human nature.

It would be a thousand pities if such were to be the end of the tragic lesson which the last few years have taught us. But, we repeat, if this is not to be the end—if the principle of national preparedness is to survive the period of reaction that is certain to follow the declaration of peace—there must be a concerted and persistent propaganda on the part of those who think and see a little farther ahead than the crowd. To this far-thinking, far-seeing group, the medical profession surely belongs. Of all men, the doctor understands the prevalence and the danger of this spirit of false security and the necessity for a continual, unremitting provision against it. In medicine, we call it prophylaxis; in nationalism, preparedness. It is the same thing. To the doctor, then, of all men, the nation looks for positive, aggressive promotion of universal military training.

Moreover, this matter is peculiarly the concern of the medical man just as economic preparedness is peculiarly the affair of the banker and financier. True the prime argument for universal military training is the argument of preparedness itself. But, aside from this aspect, it has an enormous value which nobody is better able to appreciate than the doctor; of which we are having a most striking object lesson at the present time, and to which the doctor, better than any other class of men, can give point and force. Nobody has had such opportunity as he has had to observe the physical improvement and moral de-

velopment of the young men who have recently been placed under military training. To him, this has a much further-reaching significance than the sheer phenomenon itself, important as that is. To him, it suggests the searching reflection: Suppose that this kind of influence were extended into the lives of *all* the young men in the country, in every generation, what effect would it have upon the physical and moral stamina of the nation? And the answer is: Tremendous. This consideration alone makes the application of universal military training enormously worth while and is enough to enlist the active support of the medical profession in its promotion.

There are, of course, other arguments for its adoption. In fact, it may be said that there is every reason in favor of such a movement, and absolutely no valid reason against it. The only arguments which are advanced against it—the danger of the growth of militarism in our midst, the possible creation of a caste—are found upon earnest examination to be based upon conditions that do not inhere in the principle and practice of military training at all, but, in conditions that do not obtain in this democracy. They are, in fact, discounted in advance by the outstanding fact, before our very eyes, that the most complete system of universal military training in the world has for many years been the possession of the most democratic people in the world, the Swiss. We do not imagine that the doctor really needs the question to be argued to him at all. The medical profession, as a whole is already fully persuaded of the indisputable value of universal military training. What we wish to do here is, to urge our readers to take an active part in spreading the movement abroad among those to whom its value and its necessity are not so clear. In this, as in other matters pertaining to physical welfare, the public looks to the doctor for counsel. His word carries great weight. Let your voice be heard, doctor in no uncertain tone in favor of this important movement.

MALARIAL ANEMIA

The bringing of thousands of her colonial troops to Europe has been found in France to reintroduce certain malarial conditions that had long ago become extinct. In the treatment of these conditions, quite a dif-

ference has developed in the methods employed by various French physicians. Some administer quinine only when the microbiological examination is positive; others count upon the regular intermittence of the paroxysms or the occurrence of febrile manifestations, or carry quinine systematically for a prolonged saturation. The latter method is preferred by a writer in *Le Monde Médical*. The quinine salt generally used is the chlorhydrate, in doses of 2 Grams once in twenty-four hours. To this, however, is added the use of arsenic, so that our French colleagues are rapidly approaching the adoption of quinine arsenate. In grave acute cases, the administrations are made intravenously. Arsenic is employed in the form of the cacodylate of sodium injected deeply into the muscles of the thigh.

When we get what we want, we are always disappointed to find that it is not what we wanted.

SURGEON-GENERAL GORGAS IS SIXTY-THREE YEARS YOUNG

An editorial in *The Southern Medical Journal* for May refers to the fact that Surgeon-General Gorgas will reach the retiring age of sixty-four on October 3; which, though, does not mean that General Gorgas will be retired on that date, because no one would consider retiring a man who every day is demonstrating his youth and efficiency in a position of such great responsibility as that of surgeon-general of the United States Army during the greatest war in the history of the world.

Those who are in a position to know, regard General Gorgas as second in efficiency only to President Wilson; and they marvel at the work he has accomplished in the past year. Only a young man in vigorous health could have lived through what the General has done since the war began.

Years ago, General Gorgas demonstrated that the white man can live, thrive, and accomplish as much in the tropics as in colder climates, if malaria and other tropical diseases have been eradicated. Now some are believing that he discovered somewhere on the isthmus of Panama the fountain of youth that Ponce de Leon sought in vain in the sixteenth century.

General Gorgas is engaged in the "small" undertaking of keeping a million and a half boys and young men from catch-

ing measles, pneumonia, and some diseases that do not affect the respiratory organs, that afflict those who have not learned how to take care of themselves—and he is doing both jobs better than any man before him ever did. If one knows of the regular life and simple and abstemious habits of General Gorgas, he can understand how at sixty-three years he is younger than many men at forty. If all the soldiers lived the hygienic life that he follows the sickness and the death rate in the army would be negligible; although it should not be forgotten that the morbidity and mortality rates among our troops are less than half those in the Spanish-American War and are lower than those of any other army that ever was gotten together.

Aside from the fact that there is no one who could so ably take the place of General Gorgas as surgeon-general, the United States and the world owe him such a debt of gratitude that he could not be retired until his labors during the present war have been completed. His conquests over disease have been more brilliant and epoch-making than those of any general who has fought battles against man. Gorgas has brought health and happiness to millions, while wars against man have made countless thousands mourn.

Since President Wilson holds justice and efficiency in such high esteem, there can be no doubt of the reappointment of Surgeon-General Gorgas when his term expires or when he comes to the age of retirement. If the president has not the legal right to appoint a retired officer as surgeon-general, congress will enact a law giving him that privilege. Our country as well as the whole world need General Gorgas too much for his retirement to be considered until we and our allies have conquered the Huns.

Our own weaknesses we regard as misfortunes from which we cannot escape; the weaknesses of others we consider crimes.

THE LIBERTY LOANS.

One of the curious phenomena connected with the raising of the Liberty Loans is, the comparatively limited number of our population who actually take part in them. Of course, we must remember that, when a man subscribes for a bond, he may be looked upon as subscribing for his family as well as himself, which multiplies the

number of actual subscribers by from three to five times. Nevertheless, it is certain that there is a large number of individuals who might take a share in this work, but, do not do so. Much of this is due to thoughtlessness; for indeed, many of us are not yet awake to the fact that our country is participating in the greatest war of all times. We have ranked against us such an array of military genius as the world has never seen, even in the days of Napoleon. Neither the great military machine built up by that wonderful man nor that perfected under the Roman republic and empire compares with that we are facing.

One of the things we do not yet realize is, the value of concerted action. If everyone who could just as well buy a bond, but, does not do so, if every person who might just as well invest in war-savings stamps, but, does not do so, were to do a little, the aggregate would be enormous. Moreover, these bonds form the financial backbone of our civilization; something that many persons are slow to realize. For instance a savings bank allows five percent on certificates of deposit. This is only a little more than the bonds yield us; and if the bonds should depreciate through the success of the Germans what would our savings-bank deposits be worth?!

Another thing that people do not remember sufficiently is this, that, while many of the munition enterprises afford large profits, we surely can afford first to buy liberty bonds and base upon them the loans with which to buy munitions stocks. We thus divide, and not unfairly, with the government the large profits coming from the war itself. But, many a man has a little money salted down in the bank. Many a woman carries in her stocking enough money to buy a bond or at least a few savings stamps, which might a great deal better be put into the securities of our country; and would be, if the owner realized the importance of it. A great many think that their individual contribution is too small to weigh, but, it is the combination of many small sums that make the huge aggregate necessary to carry on modern war.

Now, my suggestion is this, that each one of us make it his business to talk this matter over with each one of his patients consulting him. Come to think of it, the doc-

tors in the United States number among their patients collectively almost every human being in the United States; so, if the entire medical profession would start to use its influence in this matter, the aggregate would be incalculable. I am firmly convinced that it is the quiet, personal conversation which we have with our friends that is of the greatest benefit in this matter. We are not, as a people, emotional. We do not want to be carried off our feet by the whoop of patriotic fervor that leads us to do things which we later regret. As a race, our tendency is, rather, to sit down quietly and consider personal matters from the standpoint of duty. For this reason, all of this hurrah business is personally distasteful to very many of us. We want to realize a duty and to do it rather than to be led into making investments that we later must condemn.

THE ANXIOUS DEAD

Oh guns, fall silent till the dead men hear
Above their heads the legions pressing on.
(These fought their fight in time of bitter
fear

And died, not knowing how the day had
gone.)

Oh, flashing muzzles, pause and let them
see

The coming dawn that streaks the day
afar:

Then let your mighty chorus witness be
To them, and Caesar, that we still make
war.

Tell them, Oh guns, that we have heard
their call,

That we have sworn, and will not turn
aside,

That we will onward, till we win or fall,
That we will keep the faith for which
they died.

Bid them be patient, and some day, anon,
They shall feel earth enwrapt in silence
deep,

Shall greet, in wonderment, the quiet dawn,
And in content may turn them to their
sleep.

The poem here printed was written by Lt.-Col. John McCrae, of the Canadian Medical Service, who died in France from pneumonia, complicated by meningitis, on January 28 last. Colonel McCrae is the author of that other poem—which already has become a classic—"In Flanders Fields," of which the first stanza runs as follows:

"In Flanders fields, the poppies blow
Between the crosses, row on row.
That marks our place; and in the sky

The larks, still bravely singing, fly,
Scarce heard amid the guns below."

He received his medical education at Toronto and held an internship in the Johns Hopkins Hospital. For a number of years, he was professor of pathology at the University of Vermont, but, during the later years of his life, prior to the war, he held the dual position of lecturer in pathology and also in medicine at the McGill University Medical School. At the outbreak of the war he had just arrived in London. He immediately cabled to Canada, offering his services and was appointed surgeon to the first brigade of Canadian artillery. He was with the guns along the Ypres sector for a continuous period of fourteen months, and, as an article in *The American Journal of Medical Science* states, he was "in the thick of the engagements where the Canadian forces made an undying name for valor."

His poem, "In Flanders Fields" is one of the great spiritual contributions to the literature of the war. "The Anxious Dead," which we are printing, was his last poem. It was published in *The London Spectator*, in 1917, and by many was regarded as an answer to "In Flanders Fields."

We are quite able, while hating sin, to pity and be charitable to the sinner—when we happen to be the sinner concerned.

A WOMEN'S NUMBER OF "CLINICAL MEDICINE."

We are planning to devote the September issue of CLINICAL MEDICINE to the women of our country and of the allied countries. It is intended to collect information concerning the work done by women during this war; not only in the many Red Cross activities and in the nursing field but, also, in the various industrial and manufacturing fields, wherever women have taken the part of the men that have gone to the front. But, not only this. We want to hear, particularly, from the doctors' wives that are left behind, whose husbands are serving their country in camp, in base hospitals, at the front or wherever they have been placed. To the wives at home, it falls to educate the children, to keep up the home toward the return of the father and husband, to "manage" so that the doctor, absent on duty, need not fret and worry, knowing that the wife is doing her

share at home, even as he is doing his in the war.

Let us hear from you, you doctors' wives that are left behind. We give you thus early notice, so that you may have ample time to write us. Tell us what you are doing and how you are managing while the doctor is away. What are you telling the children? What time do you find for interests and work outside of the home?

The devil is not as black as he is painted. In fact, he is more like us than we care to admit.

THE MEDICINE-CHEST OF THE ARMY

Physicians who have entered the military service, through having accepted commissions in the Medical-Officers Reserve Corps, naturally encounter many things and conditions that are strange and different and to which sometimes they find it difficult to become accustomed. While the surgical part of the work is developed to a high degree and every opportunity is afforded for the best and most advanced training of operators, certain phases of the duties of internists seem to be regulated by ideas that are almost medieval in their obsolete character. Thus, for instance, one medical man, at present in camp, writes as follows:

"Army medicine, as I see it practiced, and the material furnished give no chance whatever to use progressive or active therapy. . . . One could hardly imagine a man trying to blubb along in private practice with the poor assortment of medicines supplied us." The only active principles which he recalls seeing on any infirmarieshelf are, quinine, strychnine, morphine, atropine, and cocaine; in addition to which, there are tablets of tincture of digitalis and of apomorphine. But—all these, with the exception of quinine, are kept under lock and key and allowed to be used only on prescription by way of the major's office and with his O. K. The things provided for use for almost every illness are synthetic salicylates (acetysalicylic acid, sodium salicylate), potassium bromide, potassium iodide, chloral hydrate, compound licorice powder, compound aloin pills, calomel, epsom salt, pseudo castor-oil, oil of turpentine.

This doctor complains that, with so many standbys left out, a physician accustomed

to using positive and definite remedies is deprived of his best and most successful weapons. "There is absolutely no use reminding oneself of the many useful things employed in civil life. Your thinking is done for you. Your ingenuity is not wanted. Your favorite methods are unavailable and more than likely would be forbidden. One must do everything just so and so, per manual of the medical department, or a bawling-out will come. . . . I am thoroughly discouraged with the therapeutic side of military medicine. It is far below what the remotest man could do with proper remedies. There is no incentive to learn more or to keep up to date."

Of course, we are aware that the government is buying really enormous quantities of drugs, but, the special predilection of those having charge of the ordering seems to be for compound cathartic pills and quinine sulphate.

We trust that our correspondent's particular complaint is tintured a deeper blue than is quite warranted by the facts; and, also, that conditions which he describes are only local. It would be of serious import if the medical officers of the army, as well as of the National Army and the National Guards, were to be hampered in the care of their sick by insufficient supplies (in quantity as well as in variety) that are needed for correcting certain abnormal processes and by means of which the sick soldiers might be restored to health more promptly than if Dame Nature were allowed to do the job, herself. Certainly, the medical officers of the army should not neglect the remedies needed in internal medicine, but, should pay as careful attention to this part of the work as is devoted to the surgical requirements.

DR. RICHARD SLEE.

Like every other patriotic and anxious American, we scan the columns of the newspapers these days for the names of friends. We are beginning to see too many of these names in the list of "casualties," but, intermingled with the bad news, we frequently find good news, also. For instance, we have just seen the notice of the promotion of our dear friend and colleague Dr. Richard Slee to the command of Camp Crane, the American ambulance cantonment, which is situated at

Allentown, Pennsylvania. Colonel Persons, who has been at the head of this camp since its establishment soon after the beginning of the war, has been sent to France and Major Slee succeeds him.

Rarely have we seen an announcement that has given us as much satisfaction and as much pride, for, Major Slee is one of us. For several years he has been a member of the editorial staff of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, and we know him well and love him. Understanding his wonderful energy, his rare ability as a military organizer, his patriotism and devotion, it is not difficult to see why he has been placed at the head of the great training organization at Allentown.

Like thousands of other good Americans, Doctor Slee has made great sacrifices in entering military service. At the beginning of the war, he was conducting a biological laboratory at Swiftwater, Pennsylvania, where he had a beautiful home in the Pocono Mountains. His business was managed jointly by himself and his son Arthur. When war broke out, he immediately offered his services. At that time, he ranked as a first lieutenant in the Medical Reserve Corps. He was sent at once to Allentown, and under the able direction of Colonel Persons he assisted in the organization of this wonderful camp, which is devoted to the instruction and training of men for the ambulance-service. He was made major and put in charge of the camp's sanitation, besides being given other important duties.

Meantime, his son Arthur also was given a commission, and on account of his special training was allotted duties of a similar character. We understand that Lieutenant Slee is going to France with Colonel Persons. The absence of these two men involved the shutting down of the Slee Laboratories, and, of course, meant great financial loss to its owners.

Doctor Slee made good from the very start, and, we are informed, has been immensely popular with the men under his charge, many of whom already are exemplifying the best traits of American manhood on the bloody fields of Picardy; for, the men in the ambulance service were the first to go.

Camp Crane has under training at times as high as 5,000 men. The command is one which, under ordinary conditions,

would be presided over by a brigadier-general. The task is one involving, not only all the abilities of organization and administration, but, also requiring technical knowledge of a high order. Major Slee has met these difficult conditions. The writer has been to Allentown and seen his work, talked with his friends and knows what is being done. It is for the reason that we predict that Major Slee will go higher. Our congratulations!

A man often envies another man his physical qualities—rarely his mental. As we have no soul mirror we cannot see the reflection of our spiritual deformities.

WEIGH THE BABY

The Child Welfare Department of the Women's Committee of the Council of National Defense sends out a request for the weighing and measuring of American children under five years of age. This is a matter of the utmost importance. It is the first feature of the Children's Year, beginning in April. The plans include activities designed to save the lives of a hundred thousand children during the coming year. Many of the physical defects that caused the rejection of so many men examined for the first draft are believed to date from slight troubles neglect in early childhood. This is a matter in which every physician individually is interested and we hope there will be a very general response to the appeal.

THE RANK OF MEDICAL OFFICERS

There is now before congress a bill providing for a larger number of general officers and officers of lower grades, in proportion to the active strength of the medical corps of the United States Army, the National Army, and so on, than is permissible under the present law. Today, all medical officers serving in the army are under the jurisdiction of the surgeon-general, who is the only general officer in the medical corps. While for medical men in the medical service of the United States Army promotion to lieutenant-colonel and colonel is possible, the members of the Medical Reserve Corps can, under present conditions, not rise to higher ranks than that of major.

The consequence is that many men now serving as members of the Medical Reserve Corps, although physicians and surgeons of

wide repute, are subordinate to line officers, to whom, therefore, they cannot present their recommendations for the good of the service with sufficient force and authority to lend them strength. Such recommendations are very prone to be neglected and overlooked, similarly as occurred all too often during the Spanish War when certain line officers not only endangered the health of the troops, but, actually caused the occurrence of much preventable contagious disease and many deaths by their opinionated refusal to pay heed to the recommendations of the medical officers in their commands. The story of this sad chapter, as told in the Dodge Report, is not pleasant reading and many attempts have been made, especially by the American Defence Society and through it by Dr. Louis Livingston Seaman, late surgeon-major of the U. S. Volunteer Engineers, to improve existing conditions and to remove the possibility of danger arising through the same causes.

The bills presented to congress by Senator Owen and Representative Dyer, which are identical in purpose, provide for a greater number of general officers; namely, with the present enrollment of fifteen thousand officers in the medical corps, there would be thirty-seven major-generals and the same number of brigadier-generals, six hundred colonels, twelve hundred lieutenant colonels, and those of lower ranks in proportion. At the same time, the medical corps would receive representation at the general-staff meetings, and, altogether, it would be endowed with an authority as to rank that would make its work much more effective, since it would give the support of rank to the recommendations of its members.

Incidentally and—although the point is not a primary purpose of the bill—the opportunity to attain to positions of higher rank in the service would carry with it improved financial position for the medical men serving in the army; and this really is not a negligible consideration.

Many medical men there are who have joined the Medical Reserve Corps and are giving their best services to their country, without complaint, although they have given up lucrative positions and incomes that are far higher than those accruing to them as members of the Medical-Reserve Corps. It is only just that members of

the army, whose work is of such tremendous importance for the health and welfare of the soldiers as is that of physicians, not only should have commensurate authority of rank, but, with it also, corresponding financial returns in the way of improved pay.

We urge all physicians to write to their senators and congressmen, requesting them to support the Owen-Dyer Bills and to secure their passage as calculated to work for the best interest and welfare of the army. Furthermore, physicians should interest their clients and their friends in this matter and induce them to write to their representatives in congress, both in the senate and in the house of representatives.

Rotten apples are the easiest to find; so, worthless friendships are the easiest to form.

THE FRAMINGHAM EXPERIMENT

A few years ago, it was suggested by the Metropolitan Life Insurance Company that an intensive experiment be made in the United States, to determine whether it is possible substantially to reduce the mortality of tuberculosis, in the hope that the disease may eventually be eradicated.

For this purpose, the Metropolitan Life Insurance Company offered to place at the disposal of the National Association for the Study and Prevention of Tuberculosis the sum of \$100,000, in order to conduct a community experiment over a period of three years in the control of tuberculosis.

After many preliminaries, which it is not necessary to detail in this place, the National Committee and an executive staff were appointed, and Framingham, a town in eastern Massachusetts having a population of approximately 16,000 people, was selected as a suitable community for this purpose. It recommended itself as an average community, with mixed industries, varied racial groups, a good local health organization, linked with an excellent state department of health, a normal percentage of disease, particularly of tuberculosis, well-trained physicians, good hospitals, and a sufficient promise of cooperation from medical, industrial, commercial, and social organizations to give reasonable assurance of success.

The Framingham Community Health and Tuberculosis Demonstration was initiated in December, 1916, and has, therefore, been

in actual operation for a little over one year. The foundation having been laid, the work is proceeding satisfactorily.

During the first year, the main objectives were: the thorough medical examination of a substantial proportion of the population, the discovery of cases of tuberculosis, and the lending of assistance to the community in the development of its program of organization to meet its own health obligation.

Concerning the program of this community experiment and work accomplished during the first year, the Community Health Station, at Framingham, Massachusetts, has just published the "Framingham Monograph No. 1"—an interesting pamphlet of twenty-four pages, and the first of its publications. Several series of publications are planned, all of which promise to be highly interesting, on account of the unique nature of the experiment being conducted in Framingham, and it is to be hoped that this undertaking not only will be carried out to the fruition of definite results but, that the lessons to be learned from it may find general application and appreciation.

Nothing is so depressing as remorse. Nothing is more weakening to the moral fiber than good resolutions that are likely to be broken.

THE REPORTING OF VENEREAL DISEASES.

A few months ago, the Chicago city council passed an ordinance amending the code concerning the reports of cases of communicable diseases to the department of health, according to which the venereal diseases—namely syphilis, gonorrhea and chancroid—are defined and declared to be contagious, infectious, communicable, and dangerous to the public health.

This action of the city council is one that irrespective of many difficulties and objections has been taken with a proper regard to the rights of the community. Although the harm to innocent persons—men and women and particularly children—that has been done through the carelessness of patients afflicted with these diseases (owing to conditions in the past, when physicians failed to recognize their true seriousness and to impress it upon the patients) is enormous and, in fact, can hardly be calculated, it is a token of better things to come that the authorities all over

the civilized world have awakened to the seriousness of the venereal problem. It is a point of even better promise that the people themselves have become conscious of the danger lurking in this social cesspool, that they are beginning to insist that this source and cause of racial degeneration shall be dealt with frankly and fully.

The spread of communicable diseases can be restrained and their transference to others be avoided only by means of proper precautions on the part of the patient, and through authorization of health-officers, whereby the latter can insist upon and enforce the same. It is for this reason that city ordinances like the one referred to should be enacted all over the country, not only in cities, but, also in country towns; and should be enforced.

The department of health of the city of Chicago has published, for distribution among physicians and others interested, a circular of information, which contains the full text of the ordinance in question and also provides complete instruction for patients having syphilis, gonorrhea or chancroid, informing them of the nature of these diseases, pointing out the absolute necessity of effective treatment, and instructing them in the precautions that are to be taken in order to protect those with whom they come in contact. This circular of information may be obtained by application to the Department of Health, Chicago, Illinois.

CHICAGO ORDINANCE ON REPORTING VENEREAL DISEASES.

In another editorial, we have referred to the ordinance passed by the city council of Chicago, requiring the reporting of venereal diseases. The ordinance in question is of wide interest and it may be well to publish it in this place. The ordinance is as follows:

"It shall be the duty of every licensed physician, of every superintendent or manager of a hospital or dispensary and of every person who gives treatment for a venereal disease to mail to the department of health of the city of Chicago a card supplied by this department, stating the age, color, sex, marital condition, and occupation of such diseased person, the nature and previous duration of such disease, and the probable origin; such card to be mailed within three days after the first examina-

tion of such diseased person; provided that, except as hereinafter required, the name and address of such diseased person shall not be reported to the department.

"It shall be the duty of every licensed physician and of every other person who treats a person afflicted with venereal disease to give to such a person, at the first examination, a circular of information and advice concerning venereal diseases, furnished by the department of health; and in addition to give to such diseased person a copy of this ordinance and to report to the health department that such diseased person has received the two documents herein specified.

"When a person applies to a physician or other person for treatment of a venereal disease, it shall be the duty of the physician or person consulted to inquire of and ascertain from the person seeking treatment whether such person has heretofore consulted with or been treated by any other physician or persons, and, if so, to ascertain the name and address of the physician or person last therefore consulted. It shall be the duty of the applicant for treatment to furnish this information and a refusal to do so or falsely stating the name and address of such physician or person consulted shall be deemed a violation of this ordinance. It shall be the duty of the physician or person consulted where the applicant has heretofore received treatment to immediately notify by mail the physician or person last heretofore treating such applicant of the change of adviser; such notification to be made upon a form furnished for that purpose by the department of health. Should the physician or person previously consulted fail to receive such notice within ten days after the last appearance of such a venereally diseased person, it shall be the duty of such physician to report to the health department the last appearance of such a venereally diseased person.

"Upon receipt of a report of a case of venereal disease, it shall be the duty of the commissioner of health to institute such measures for the protection of other persons from infection by such venereally diseased persons as said commissioner of health is already empowered to use to prevent the spread of other contagious, infectious or communicable disease.

"All information and reports concerning persons infected with venereal diseases

shall be confidential and shall be inaccessible to the public, except in so far as publicity may attend the performance of the duty imposed upon the commissioner of health by section 1193e of this ordinance.

"The parents of minors acquiring venereal diseases and living with said parents shall be legally responsible for the compliance of such minors with the requirements of the ordinance relating to venereal diseases.

"Any person who violates, neglects or refuses to comply with the provisions of * * * * this ordinance shall be fined not less than twenty-five dollars (\$25.00) nor more than one hundred dollars (\$100.00) for each offense."

No matter how poor and mean a man is, his friendship is worth more than his hate.

PREVENTABLE BLINDNESS

The question of the prevention of blindness has especially interested us recently, since we have found how much work has been done, and well done, and with which we were totally unfamiliar. It seems that Buffalo still is prominent in the attention which it is given and in the brilliant results that have been attained in the marked diminution of blindness from industrial accidents and other causes.

Two of the chief hazards to the sight in industrial life may be found in the kind of work the employee is doing and in his own carelessness in using poor protection against accidents. But, indeed, you scarcely can call many of these injuries accidental, since they occur so very frequently, are so well understood, and can be so readily prevented. Take, for instance, the use of guards on lathes to catch steel chips from a tool. When anything has been studied out as thoroughly as this, one scarcely can speak of an accident as resulting from its neglect.

Some corporations, such as the United States Steel, have distinguished themselves especially by the attention they have given to these matters. Others, we are sorry to say, seem to be equally distinguished by their negligence. Surely it is worth one's while to use every possible precaution to protect his eyes when engaged in work offering especial opportunities for injury to these irreplaceable organs and to guard against this.

Leading Articles

The Anatomy and Physiology of the Stomach

By A. L. BENEDICT, A. M., M. D., Buffalo, York New

Editor, Buffalo Medical Journal

EDITORIAL COMMENT.—While we do not often indulge in difficult theoretical discussions and descriptions, it has seemed serviceable to devote much careful study to the anatomy and physiology of the stomach, in order to facilitate the understanding of its pathology. In this manner, our ability to treat gastric diseases will be much increased. We are under obligation to Doctor Benedict for his masterly description presented in this paper.

THE stomach is part of the primitive alimentary canal, formed by an infolding of hypoblast, backed by visceral mesoblast, meeting similar invaginations of epiblast backed by parietal mesoblast at its upper and lower extremities. The meeting-point of the lower end is just above the anus.

It will be noted that hypoblast forms only epithelium, and this of a bulky kind—columnar, cuboid, and so on. Epiblast regularly forms squamous, superficial epithelium, of a protective rather than secretory function, though it imitates hypoblast in the salivary glands and mammae, and forms, by infolding in other regions, nerve-cells, as of the brain and the peculiar forms in the end-organs of the various special senses. The genitourinary cell-mass, which may be considered as not having been differentiated into the three germ-layers, also forms epithelium similar to hypoblastic, as in the kidneys. The mesoblast also forms what are virtually epithelioid cells of the squamous type, as in the peritoneum and other body-cavities, from visceral mesoblast and the joint and tendon synovial membranes from parietal mesoblast. There is, however, a tendency to regard some of these membranes, notably of the body-cavities, as hypoblastic.

It may be remarked, in passing, that the term endothelium is ludicrous from the etymologic standpoint and that, if we are going to assign a quite imaginary meaning

to its second component, it would be better to call it mesothelium.

All structures of the body having a general fibrous, or linear, structure and a supporting and connecting function are derived from mesoblast. Visceral mesoblast forms unstriped, involuntary muscle, while parietal mesoblast forms striped, voluntary muscle. There is an analogous but less accurately followed distinction between nonmedullated, sympathetic nerve-fibers and the medullated, cerebrospinal nerves.

Whether there is any essential difference of structure between visceral and parietal tissues that have not been differentiated beyond the ordinary forms of connective tissue, is not so clear. Supporting parts directly connected with voluntary muscles, as bones and cartilages, are derived from parietal mesoblast. It is entirely possible that the theoretic distinctions as to structure and function are not carried out to their full degree. At any rate, we clearly recognize muscular and nervous structures evidently parietal in origin, that partake of the function of those derived from visceral mesoblast, as the striped muscles of the pharynx and those connected with respiration and the pneumogastric nerve.

All this has been interpolated before considering just where the upper line of junction lies, between the infolded hypoblastic and visceral mesoblastic primitive alimentary canal and the invaginated tube of epiblast and parietal mesoblast. Appar-

ently, the epithelial juncture occurs at the cardia, whereas the muscular backing of the epithelium is joined just below the pharyngeal muscles. A curious and possibly significant analogy may be mentioned along quite different lines. The stringy mucus of the esophagus is quite different from that of the stomach, and the same distinction exists between the mucus of the cervix of the uterus—the internal termination of which marks the limit of infolded epiblast, to join the epithelium of the lower limit of the undifferentiated genitourinary cell-mass—and that of the body of the uterus.

The liver and pancreas are essentially ramified extensions of the alimentary canal. The lungs are another extension from the same, the terminal tube of which has become virtually disconnected from the primitive alimentary canal, though still connecting with the infolding of epiblast. The thyroid gland is a still more thoroughly separated outgrowth from the primitive alimentary canal. Remembering the function of the lungs, of taking in oxygen, and the pretty-well demonstrated function of the thyroid gland, of assimilating iodine in a special organic form, it is interesting to note that every material thing taken in by the body for its use—unless by some purely adventitious and additional way—depends upon this tube of hypoblast backed by parietal mesoblast. On the other hand, it may be said that, with the exception of some glandular functions, the function of epiblast is, to protect us from and give us cognizance of the external world.

The stomach is formed as a partial torsion and dilatation of the upper portion of the alimentary canal—an illustration of the fact that nearly *every pathologic process has its normal counterpart*.

Histology

As already stated, all hypoblastic epithelium is bulky, that is, its three diameters are somewhere near the same. This fact provides for its secretory activity. Every hypoblastic cell is essentially glandular.

It by no means is a quibble of words to say that the lining of the stomach is a glandular, and not a mucous, membrane. In a sense, the same is true of the intestine; however, the analogies of the stomach to a gland and its lack of analogy to ordinary accessible mucous membranes are so marked that it is well to impress this

fact by the term used. The stomach does contain some cells that go through the ordinary goblet-process and emit mucus, but, these are normally much less numerous, both as to numbers and importance.

The strictly normal stomach secretes very little mucus, and even in cases far enough from the normal to warrant investigation most of the mucus found in stomach contents obtained by vomiting or intubation comes from the esophagus or upper air-passages. However, as the stomach is, by its ordinary use (or, habitual misuse)—subjected to variations of heat and cold and to mechanic and chemic irritation, some part of it is practically always in a state of greater or less inflammation, even amounting to minor degrees of ulceration. It is an interesting and, I believe, unsolved problem to what extent the inflammation of an organ that, normally, secretes mucus, is denoted by an excess of mucus; also, especially in the case of the stomach, it is a much more difficult problem than generally is appreciated to determine whether the mucus found in stomach contents really arises from the stomach.

The ready diagnosis of gastric catarrh is often made from the usual large mass of esophageal mucus. Which reminds me of a postmortem examiner who was wont to pull from the heart the "chicken-fat" clot characteristic of slow death and diagnose fatty degeneration of the heart. The characteristic long, stringy mucus of the esophagus, paralleled only by that of the cervix uteri, suffices for its identification. So, too, mucus intimately associated with coal-soot or other foreign matter obviously accidentally taken into the mouth or inhaled or with ciliated epithelial cells is plainly nongastric. Gastric mucus is rather likely to occur in small pearly masses, but, unless cells can be identified, it is not so much characteristics as lacking characteristics that indicate its extra-gastric origin.

A broader problem, which has both its diagnostic and its nosogenic aspects, is as to what extent an inflammation produces and is measured by the secretion of mucus. I must confess that the diagnosis of gastritis is, for myself, extremely difficult in many cases and mostly depends rather upon probabilities and general conditions than upon actual identification either of mucus or cellular debris. Unless one is very expert with the microscope, it is extremely difficult to distinguish between

these three conditions: The normal shedding of epithelium and secretion of mucus; the usual succession of minor local inflammatory reactions to indiscretions in diet; a genuine gastritis of clinical importance.

The Stomach Really a Gland

The mucus-secreting cells of the stomach are, however, of minor importance and are interspersed among about 5 million tubular glands, set closely together, with their long diameter perpendicular to the surface of the stomach. These are bound together by delicate connective tissue, including smooth muscular fibers, and with considerable lymphoid tissue, though nowhere in such masses as form the solitary and agminated glands of the intestine. It should be noted that the muscular elements often termed the *muscularis mucosæ* differ from the type arrangement quite as much as the glandular lining differs from an ordinary mucous membrane, forming a honeycomb rather than a membranous expanse of muscle.

Instead of saying that the stomach contains 5 million tubular glands, let us, rather, say that it is a gland, spread out one layer of acini deep on the interior of a hollow supporting structure. Its parenchyma is just as much a gland as that of the pancreas and liver, in which the acini are many layers deep and the acini lead into minute and then into larger ducts.

The gastric glandular tissue, though only one layer deep, is elastic only to the same degree as other glandular tissue. Its total volume corresponds to the area of the supporting muscular and fibrous supporting structure when fully distended. Hence, as the latter contracts (it never, under strictly normal conditions, being fully distended), the glandular lining is thrown up into folds termed *rugæ*.

There is only one other organ in the body that contains *rugæ*, and this organ is found in only about 50 percent of the human race; and its *rugæ* are not quite so strictly so termed as in the case of the stomach. A rather common type of man spends an enormous amount of energy, time, and money in distending *rugæ*, and it is rather a matter of accident or of partial disability that leads this type to even an apparent discrimination between the particular *rugæ* of these two organs.

As a matter of convenience, however, we may speak of the stomach as containing

glands rather than as consisting of a glandular mass. In this superficial sense, the cardiac, or fundal, end of the stomach contains almost entirely simple tubular glands. These, however, are present throughout the stomach, and, indeed, in practically the same form though not with the same secretory function, throughout the entire intestine, in which latter they are called the glands of Lieberkuehn. Toward the pyloric end of the stomach, shorter branched glands appear, in increasing proportion as the pylorus is approached, and continuing into the duodenum, but, becoming rather few after the second, descending loop of the duodenum is passed. It is said that they are never found beyond the duodenum; still it is always dangerous and never safe to use the terms "always" and "never" in connection with medical matters. In the duodenum, these branched tubules are termed Brunner's glands. It is quite possible, though not ordinarily so believed, that these glands may really have somewhat the same secretory function both in the stomach and the duodenum.

To anticipate a consideration of the physiology, while the glands are under discussion, attention may be called to the fact that the reaction of the alimentary canal is faintly alkaline in the mouth, decidedly acid in the stomach, strongly alkaline in the upper part of the intestine after the gastric acidity has been overcome, and, lastly, in the lower part of the large intestine, often acid again, although rather from fermentation than the result of secretion, so that this final reaction, being merely adventitious, is not invariably acid.

A theoretic principle has been enunciated to the effect that, when a reaction changes, it does so by a preponderance of secretory power contrary to the previous reaction, immediately after the organ in which the change occurs is reached. Thus, it follows that most of the acid secretion of the stomach occurs in the cardiac or fundal glands. It has also been taught that the glands of the stomach contain two kinds of cells in their walls, the chief (in number as well as in accredited importance of their secretion), which secrete ferments, and the parietal, not quite so closely opposed to the central duct or tubule, of different staining characteristics, which secrete hydrochloric acid.

[*To be continued.*]

Dakin's Antiseptic in the Treatment of Wounds

By SMITH J. TOWNSEND, M. D., Gilmore City, Iowa

IN our surgical work we have, for some time past, practiced aseptic or antiseptic surgery and have been able to secure with gratifying constancy a blameless healing of the resulting wounds. As a result of the great war now in progress, our profession has suddenly been called to treat a long succession of cases in which a raging and often rancid suppuration was present, and found that all the old drugs upon which they had so comfortably and confidently relied were hopelessly inadequate and futile. A challenge was, so to say, thrown to the profession, and I think we may now, with due modesty, assert that it has been splendidly and triumphantly met; and it seems to me that at this time we may profit by reviewing some of the literature and discussing our results with some of the newer remedies that have come to us as a result of the war.

Early in the war, the Rockefeller Institute sent Dr. H. D. Dakin, an American chemist, to France to undertake research-work there in connection with the treatment of infected wounds, and Doctor Carrel, also of that institute was sent to test in practice Doctor Dakin's theories. We find that these two men worked for some time to discover a chemical agent that would render infected wounds sterile without injury to the tissues and that after testing over two hundred preparations, Doctor Dakin finally devised a solution of sodium hypochlorite which, upon being tried out by Doctor Carrel, yielded such remarkable results that the whole medical world at once became interested.

Doctor Carrel adheres to the surgical principle of the free dependent drainage, as it has been established by centuries of surgical experience.

It is not easy to say in just what way this new method acts—whether its effects are produced by reason of the strongly antiseptic properties of Dakin's fluid or because of other properties not directly concerned with the killing of microorganisms, or whether the excellent technic is responsible, in that it necessitates a greater general

care of the wound, a free opening of all recesses, and a constant supervision that detects at the earliest moment any harmful development on the granulating surface.

However this may be, the most striking effect visible to the eye in an infected wound treated with Dakin's solution is, that the surfaces are cleaned very rapidly. Dead tissue, even large sloughs, are quickly digested away and the surface becomes smooth, clean, and bright red in color. It is, therefore, an arguable proposition that Dakin's solution, as applied by the Carrel technic, does not act alone as a germicide, but, also, perhaps chiefly, as an agent promoting proteolysis, this resulting in the destruction of those parts of the wound on which alone, or chiefly, microbes can find a place to proliferate. It, therefore, after all, is the mechanical cleansing of the wound that is of the greatest importance, so that the action of Dakin's fluid is, perhaps, very much the same as that of the surgeon's knife where the wound is excised.

As I have said, the whole medical world has been interested in this method and many eminent surgeons who have tried it have reported upon their results; especially so since the original "Dakin's solution of hypochlorites" has been replaced by the more stable and more effective remedy known as chlorazene (paratoluenesodiumsulphochloramide), and since a further improvement was introduced in dichloramine-T.

Advantages of the Newer Wound Treatment

Dr. Joshua Sweet (captain, Medical Reserve Corps, United States Army, Base Hospital No. 10), France, reports, in *The Journal of the American Medical Association* of September 29, 1917, the results obtained with Dakin's remedy in some 80 cases as being equally as good as any he had seen from any other antiseptic agent, and he thinks the use of this antiseptic, dissolved in eucalyptol and paraffin-oil¹ is of great advantage in wound treatment, be-

¹A better solvent was recently produced by Doctors Dakin and Dunham, to which they have given the name chlorcosane.

cause (1) it saves the pain of wound dressing, (2) it saves dressing material, (3) the amount of solution is small, (4) the number of wounds which a surgeon can dress in a given time is far greater than by any other method.

Dr. W. A. Sherman, of Pittsburgh, says that the use of the Dakin antiseptic has greatly reduced the mortality of the wounded soldiers and that amputations have become much less frequent.

In the December 1, 1917, issue of *The Journal of the American Medical Association*, there appears, on the Carrel-Dakin treatment of wounds, a report made by a special committee appointed by the director general of the British Army Medical Service in which they say that the results of the Carrel-Dakin treatment, as seen in a large series of unselected cases, were remarkably good. The committee is of the opinion that the Carrel-Dakin method of treatment, if carried out thoroughly, is full of promise and believe it will: (1) diminish the dangers incident to sepsis including secondary hemorrhage, (2) hasten the patient's convalescence, (3) lessen the liability to stiff joints and cicatricial deformities, (4) enable the patients to leave the hospital with better general health than they otherwise might, (5) when secondary operations become necessary, these operations are more likely to be free from septic complications than when some other system of primary wound treatment has been adopted.

However, in *The Journal of the American Medical Association* for November 17, 1917, Dr. A. D. Bevan, of Chicago, published an article, in which he criticised the Carrel-Dakin treatment of wound infection and warned against a too general acceptance of this method, which he regards as only in the experimental stage.

Dr. William H. Welch, of Baltimore, replied to Doctor Bevan's criticism in the same journal, for December 8, reporting very favorable results from the use of Dakin's antiseptic.

In my work with the Dakin method, I have made use of the tablets prepared by the Abbott Laboratories, of Chicago, under the trade-name of Chlorazene, and wish to report the following case in which this remedy was used freely.

Chlorazene in a Case of Amputation

On October 1, 1917, I was called out into the country and found the patient, a man

of sixty years, with both feet cut off by a mowing-machine, from which he fell. The stumps were filled with dirt, as he had crawled over plowed ground after the accident, so as to get to where he could summon aid. He had bled until he was almost pulseless. I called Dr. J. A. Wagner to assist me.

We promptly amputated both stumps, painted them with tincture of iodine, washed thoroughly with chlorazene solution, and sewed up the wounds over perforated drainage-tubes. We then gave a hypodermic injection of pituitary solution, also a saline enema, then left the patient in deep shock in the care of the nurse. That evening, Doctor Wagner and I drove out to see the patient and found that he had rallied to a considerable extent, seemingly doing much better than we had expected. We ordered the hypodermic use of pituitary solution to be repeated every four hours and departed.

The next morning, I redressed the stumps, irrigating with the chlorazene solution. I repeated this treatment daily for fifteen days, then at less frequent intervals for two weeks longer, when the stumps practically were healed over, and without having formed pus, a fact which I consider unusual, when the muscles and bones were so thoroughly ground full of dirt.

Parresine in an Electric-Wire Burn

Before we leave this subject, I want to mention another remedy which has been called to our attention by the war through the work of Doctor Barthe de Sandfort, of France, namely, the application, hot, of a waxlike preparation to burns and other superficial wounds after they have been thoroughly cleansed with some antiseptic such as Dakin's antiseptic.

In my experience with this method of treating burns, I have used a preparation—also manufactured by The Abbott Laboratories, of Chicago—under the trade-name of Parresine. My first case occurred September 13, 1917, when one of our workmen got his hands and arms in an electric arc and the superficial tissues were "cooked". After cleansing the surfaces with chlorazene solution, I applied parresine, and this afforded immediate relief from the excruciating pain. The dressings were changed daily for two weeks, because of the accumulation of serum under the dressings;

however, the wounds healed without any deforming scar-tissue.

On September 26, 1917, I was called to a man who had just pushed his automobile out of a burning building, where a 10-gallon can of gasolin had been ignited. Both his hands were badly burned by hot varnish on the car as well as by the gasolin. I washed the hands with chlorazene solution, dried them thoroughly, then applied parresine. This instantly gave great

relief, and the next day he went to his work as an electrical engineer. I dressed his hands frequently and they healed nicely, only, recovery was somewhat delayed, because he continued at work.

The advantages of this parresine dressing are, that it keeps the air out, so that aerobic germs can not develop, and, that it assures immediate relief from pain, while at the same time the dressing is pliable and allows healing to go on rapidly.

Diseases of the Seminal Vesicles Complicating Prostatic Disease

By G. FRANK LYDSTON, M. D., Chicago, Illinois

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IN respect to their association with its pathology, the seminal vesicles are the most important of the organs anatomically and physiologically related to the prostate. They consist of two convoluted tubes about 2 1-2 inches long, 1-2 inch wide and 1-4 inch in thickness, situated above and laterally to the prostate. The distal extremity of each vesicle terminates in a duct the size of a knitting needle and 3-4 of an inch in length—the ejaculatory duct. These ducts open, slit-wise, on either side and at the anterior extremity of the verumontanum. The ejaculatory ducts are enclosed in a fibrous common sheath and in their course through the prostate are surrounded by a lymph space or canal, the infundibulum of the prostate.

The cavities of the seminal vesicles are irregular and divided by muscular bands and trabeculae into cul-de-sacs. Internally to each vesicle at its lower part lies the termination of the spermatic cord of the corresponding side. The terminal inch and a quarter of the cord is enlarged and the vas deferens dilated, forming a cavity, the ampulla of Henlé. This cavity opens, valve-wise, by a small aperture into the cavity of the vesicle. The cavity of the vesicle is lined with columnar secretory epithelium. Under normal conditions the vesicles are filled with an opalescent fluid which dilutes and increases the bulk of the semen and protects and nourishes the spermatozoa. The

spermatozoa-containing testicular secretion distends the ampulla of Henlé, the muscular wall of which reacts somewhat like the auricles of the heart forcing the spermatozoa into the vesicle, where they normally are retained until complete emission—or until slight leakage occurs under sexual excitement or as a consequence of disease.

As Fuller has shown, interference with the mechanism of ejaculation often is responsible for disturbances of the sexual function. When ejaculation occurs, the contraction of the muscular fibres of the vesicles combined with that of the circular muscular fibres of the prostate, aided by the swelling of the verumontanum, prevents the semen from passing backward as it distends the prostatic urethra.

The seminal vesicles can be felt with the index finger above the prostate, unless that organ materially is enlarged, providing the surgeon has a finger at least moderately long and a fair knowledge of the necessary technique. As to the posture of the patient, that posture is best to which the surgeon is most accustomed. The latero-prone, lithotomy, knee chest and stooping positions alike have their advocates. In the lithotomy position deep pressure on the hypogastrium aids in bringing the vesicles within range of the finger. The normal vesicle is felt as a soft, obscurely lobulated, movable mass of about the diameter of the index finger. It easily slips from

side to side under the pressure of the finger.

The seminal vesicles only recently have received special consideration at the hands of pathologists. In a general way the diseases of these organs hitherto have received attention only as conditions secondary to diseases of the urethra, bladder, and prostate; in other words, as a part of the pathologic *ensemble* presented by gonorrhea, cancer, and tuberculosis. The profession is but just beginning to understand that disease of the seminal vesicles bears a relation to the male genitourinary organs almost as important as—and quite similar to—that which fallopian disease does to ovarian and uterine disturbances in the female.

The most frequent and important disease of the seminal vesicles is, gonorrheal infection. When once this has occurred, the author believes that perfect restoration of the vesicles to a healthy condition never occurs. It must be remembered, however, that the condition does not necessarily remain gonorrheal; on the contrary, gonococci may disappear from the semen, although the vesicles remain in a diseased condition for an indefinite period—probably always, pathologically, if not clinically. The gonococcus, too, may become transformed into a germ which to all intents and purposes is innocuous—a germ “corresponding to the gonococcus”—but which, when conveyed to a new and favorable environment, such as is presented by an unhealthy genital tract in the female, again may acquire specific pathogenic properties.

Great credit is due Jordan Lloyd of Birmingham, England, and to the late Byron Robinson, for having called attention many years ago to the prolonged infection of the seminal vesicles that frequently follows gonorrhea and to the pathological analogy of the vesicles to the fallopian tubes.

Seminal Vesiculitis

Seminal vesiculitis is a condition very frequently associated with prostatitis. The profession is greatly indebted to Fuller for his researches upon this subject.¹ Seminal vesiculitis is dangerous not only from the standpoint of infection, but it produces various psychic and organic disturbances of the sexual and urinary functions.

The causes of seminal vesiculitis are several, viz.: (1) Gonorrheal infection.

This is the most frequent and important of all causes. (2) Simple infection from urethritis of non-gonorrheal character. (3) Colon bacillus infection. (4) Prostatic disease involving the seminal vesicles secondarily. (5) Masturbation and sexual excess. Prolonged sexual excitement without gratification and coitus interruptus enter into consideration here. These various etiologic factors may be assisted in their operation by such local sources of irritation as bicycling, horseback-riding and the gouty and rheumatic diatheses.

Symptoms

The symptoms of seminal vesiculitis vary according to the acuteness of the process and the character and degree of the associated primary or secondary conditions. Thus, when the prostate is involved, the function of micturition markedly is disturbed. In other instances, the symptoms are referable entirely to the sexual function. Hemorrhagic emissions, frequent nocturnal emissions, abnormal sexual excitement, impotency, premature ejaculation, painful orgasm—any or all of these conditions may arise in different cases.

In acute seminal vesiculitis the vesicles are involved in the general inflammation of the parts about the neck of the bladder: i. e., the prostate and surrounding cellular tissue. Under such circumstances, the acute inflammation of the seminal vesicles merely is a part of the prostatic disease. In most instances of the chronic variety the prostate is involved to a greater or less extent. In other instances, however, there is very little disturbance of the prostate, the acute trouble having subsided without leaving any appreciable change in that organ, while the seminal vesicles still are plainly involved in the pathological process.

When the process is acute or subacute, a sensation of throbbing, weight, and quasi-voluptuousness in the perineum, perhaps with more or less perineal tenderness, is experienced, these symptoms depending largely upon the amount of prostatic disturbance. Voluptuous sensation mingled with a certain amount of pain and tenderness during defecation, particularly if the bowels be constipated, often is noted. The perturbations of the sexual function already mentioned also enter into the symptomatology. Painful and hemorrhagic

¹“Diseases of the Seminal Vesicles,” E. Fuller.

emissions are a very important symptom in some acute cases.

Diagnosis

The diagnosis is established by digital exploration per rectum. The distended, thickened, and tender seminal vesicles are distinctly perceptible to the examining finger. The local conditions vary according to the degree to which the prostate and surrounding cellular tissue are involved. It is the author's belief that a greater or less amount of perivesicular lymphatic hyperplasia is a very important element in chronic inflammation in this region.

Treatment

The treatment of seminal vesiculitis comprises (1) treatment directed to the vesicles themselves; (2) measures for the correction of associated conditions.

Whether the associated conditions be primary or secondary, sexual rest is a *sine qua non*. Massage of the seminal vesicles per rectum, associated with instillations of astringents—such as, silver nitrate, copper sulphate, protargol, and thallin sulphate—are essential. These instillations should be given in relatively weak solution, but in large amount, and should precede the massage. By this method, more or less fluid is made to enter the mouths of the prostatic and ejaculatory ducts, thus obtaining an alternative effect upon the chronic inflammation that very likely affects these structures. It is probable that in some instances the astringent fluid is forced into the ducts of the prostate for a sufficient distance to modify materially the chronic inflammation of the organ. In conjunction with these remedies the passage of the sound from time to time is useful. All contractions or other diseased conditions of the urethra demand attention, and, so far as possible, should be removed. Infection of the urethra and bladder should be treated by irrigations and such internal remedies as are indicated under ordinary circumstances. The Oberländer method of dilation, and irrigation have proved of service under such conditions. It must be remembered that no treatment of the diseased seminal vesicles is likely to prove effective unless associated infectious conditions of the mucous membrane of the urethra and bladder, and particularly of the prostatic urethra, are simultaneously treated. Careful restriction of the diet—which should

be as non-stimulating as possible,—avoidance of all sources of sexual excitement, and abstinence from tobacco and liquor should be insisted upon. Bicycling and horseback-riding should be strictly interdicted. Attention should be paid to the bowels and condition of the skin. Tonics and anaphrodisiacs usually are indicated, and should be of such character and dosage as seem to be demanded in each particular case. Hot sitz-baths and rectal injections of large quantities of hot water are useful adjuvants.

The author desires to lay special stress upon the fact that careful treatment of morbid conditions of the seminal vesicles very often is effective in relieving otherwise incurable cases of impotency.

It is noteworthy that in many cases in which prostatic and seminal vesicle massage is attempted by the practitioner, it is inadequately and inaccurately performed. Too much or too little force is employed, and, unless the physician has a fairly long index finger, or a skilled technic and a well-developed *tactus eruditus*, it is probable that in the majority of instances the seminal vesicles are either not massaged at all, or at most, imperfectly. This is the author's conclusion from practical experience in the treatment of a large number of patients that have been said previously to have had prolonged massage treatment for seminal vesiculitis. Observations of the value of vaccines in prostatic disease equally apply to diseases of the seminal vesicles—as might be inferred from the fact that the prostate and the vesicles are so frequently simultaneously involved in infection.

Tuberculosis and Cancer of the Seminal Vesicles

Tuberculosis and cancer of the seminal vesicles often complicate cancer and tuberculosis of the prostate or bladder. They practically do not occur as primary conditions. There may be certain exceptions to this rule, but they are so rare that they are not of practical importance. The seminal vesicles have been operated upon in certain cases for the relief of tuberculous disease. Where the disease apparently is limited to these structures an operation perhaps may be warrantable, but, the author ventures the opinion that in most of the cases of alleged primary tuberculosis of the seminal vesicles the condition is an induration incidental to chronic seminal vesiculitis

of infectious origin. This usually will yield to massage and the other measures of treatment already suggested, perhaps not to the extent of complete cure in all cases, but to a sufficient degree to render the patient perfectly comfortable.

Extirpation of the Seminal Vesicles

Extirpation of the seminal vesicles is a matter for serious consideration, but is an operation the sphere of which is gradually enlarging. Draining of the vesicles via the perineum sometimes is indicated in obstinate rheumatoid conditions of gonorrheal origin and in certain obscure "nervous, urinary and sexual" disturbances. Generally speaking, it is difficult to successfully treat symptoms referable to the prostate

and vesical neck while an infected vesicle constantly is adding fresh fuel to the pathologic fire. Injection of the seminal vesicles via an opening in the vas as suggested by Belfield sometimes is very efficacious. The author has had a limited experience with the use of the x-ray and radium in chronic seminal vesiculitis, and is inclined to believe that they have a certain sphere of usefulness. Radium, especially, should be given a trial before subjecting the patient to so serious an operation as vesiculotomy or removal of the vesicles.

As a final resort, drainage of the vesicles may be performed. Extirpation of the vesicles for tuberculous or malignant disease, in the author's opinion, rarely, if ever, is justifiable.

Membranous Dysmenorrhea: Its Pathology and Treatment

By C. S. NEISWANGER, M. D., Chicago, Illinois

I FEEL impelled to write a few words on the above trouble because gynecologists have been able to do so little to relieve it except by radical operation which, from my experience in treating many cases, seems irrational.

Although considered a rare form of dysmenorrhea I believe it occurs very often, but, in modified forms or different degrees of intensity. While the pathology is well-known, the etiology is obscure and is largely speculative even by the best writers on the subject.

In normal menstruation the endometrium commences to be greatly swollen and spongy about the eighteenth day after the flow, and continues so up to the next period, when the superficial layers of the swollen uterine mucosa are cast off, thus giving rise to hemorrhage, while the deeper layers remain intact and form a nucleus, as it were, for the reconstruction of the entire endometrium at the termination of menstruation.

In membranous dysmenorrhea, instead of the endometrium taking on that swollen, spongy condition for the reception of the ovum, it begins, about the eighteenth day after the flow, to harden, and that condition continues up to the time of the period

when the hardened mucosa has to be born, as it were, by uterine contractions with all the pains of childbirth. Many women affected with this trouble have told me they would as soon go through labor as to have a menstrual period.

Sometimes a complete cast of the uterus is discharged with much pain; which is followed, for the remainder of the period, by comparative comfort. More often however, the membrane is discharged in shreds and the intense pain and discomfort is prolonged to five days or one week, depending on how long it will take the uterus to rid itself of the membrane.

The gynecologist will curette, but, that only bridges over the one period, and has to be repeated until the patient is forced to accept the last alternative—hysterectomy—then she becomes a hysterical, nervous wreck for the balance of her life. The picture is not overdrawn.

The rational remedy is one that will keep the endometrium from hardening and allow it to pass off as menstrual fluid. In negative galvanism we have a remedy that is invaluable—I might say infallible—in these cases.

The negative pole, or cathode of a continuous current acts on tissue much like a

modified alkaline caustic: disintegrating, liquefying and softening.

While the logical time for beginning treatment would seem to be at the commencement of the premenstrual swelling—about the eighteenth day after the period—I have found from experience it is best to commence about the third or fourth day after the flow and give two treatments per week, or about seven treatments before the next menstruation. This, I have found, is sufficient to keep the endometrium in a softened condition and insure a comfortable period.

My last case, a typical one, will show the results of treatment in the majority of cases: Mrs. K—age 40—married ten years—no children. Had dysmenorrhea since shortly after puberty, the periods lately becoming so severe that she was obliged to remain in bed five days under narcotics, and had made up her mind to be operated upon. After five treatments of intrauterine galvanism — negative — she phoned me she had commenced to menstru-

ate in the night without pain, and was having a very comfortable period.

Technic

The patient is advised to take an antiseptic vaginal douche before coming to the office. A vaginal speculum is employed throughout the treatment; the os is exposed and carefully mopped off with an antiseptic solution. The electrode is 28 centimeters over all, the distal end having a copper tip 4 centimeters long, the balance of the staff is insulated with hard rubber. These electrodes can be purchased in 4 sizes, viz: 14F, 16F, 18F, 20F.

The electrode is introduced to the full depth of the uterus and attached to the negative pole of a constant current: the positive terminal is the usual abdominal pad. A current of 25-30 milliamperes is maintained for ten minutes and the sitting repeated twice a week.

The usual pain and uterine colic often attending intrauterine application is entirely absent, because the endometrium, in these cases, is not sensitive.

After Thirty Years—III

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from June issue, p. 443.]

The Doctor As a Business Man

IT often is said, both within the profession and outside of it, that doctors are poor business men. This, no doubt, is true to some extent, but, it is also true that the doctor's business conditions are different from those of any other occupation, and that, therefore, the methods of commercial affairs must be modified somewhat to make them applicable to the doctor's circumstances. Sickness, as a rule, comes unexpectedly; consequently, people are not able to plan in advance for the financial preparation necessary to meet their doctor-bills. Rent, food, clothing, and most other expenses can be estimated in advance and prepared for. Doctor-bills, however, are incurred whether they can be afforded or not, and to all except the well-to-do this means a sacrifice of money that can illy be spared from the family resources.

The consequence is that the doctor can

not employ the same means for collecting his bills as can the landlord or the grocer.

The question of a man's business methods involves two considerations, first, how he gets his money and, second, what he does with it. I purpose to devote a brief consideration to each of these aspects of the question.

Fees

The fees charged by doctors in any given community are largely determined by custom, and this is especially true in the country and in small towns. In a large city, there obtains a greater diversity of fees, each man charging what he thinks he can get through his skill and reputation. Local medical societies have, in many places, adopted fee-bills; still, these have not been generally followed. Especially is this true for Chicago, because the fee-bill of the Chicago Medical Society was framed by men who must have been incurable optimists on the subject of what the public could or would pay. The fees

there listed may sometimes be collected from very rich or very good natured patients by a few especially fortunate doctors; but, as a guide to a beginner to help him determine a scale of prices, this fee-bill is absolutely worthless. The great mass of the common people simply can not pay such figures, for, they have not the money nor have they the way to get it.

The result of trying to enforce a scale of fees beyond the power of the public to pay is demoralizing. Many a man has joined the ranks of the deadbeats because of a doctor-bill that he had no means of paying. Indeed, most deadbeats have become such involuntarily. They originally started out to pay their way, but, through misfortune of one kind or other—often through sickness—they became involved in a mass of debts that seemed perfectly hopeless in view of a limited income; then, at last, they move away, to some neighborhood where they are not known. And, when they have again exhausted their credit, they repeat the process.

A moderate fee collected is better than a big one that eventually has to be transferred to the profit and loss column. It is better both for doctor and patient. In the one case, the doctor gets his fee and keeps his patient; in the other, he loses both. In a general family practice, the most profitable business comes from those families who have such confidence in the doctor that they remain faithful to him year after year; and, in order to retain these, it is wise to adjust one's charges with some reference to their ability to pay.

In fixing a fee, there are several elements that enter into the question. Among these, we may mention the following: (1) the skill required; (2) the time consumed; (3) the difficulty of manual or instrumental manipulation; (4) the value to the patient of the service rendered; (5) the disagreeableness of some operations; (6) expecting the rich to make up to some extent for the loss on free services rendered to the poor.

To illustrate: Some obstetric cases consume a great deal of the doctor's time without being especially difficult or requiring special skill. This time can properly be charged for. Another obstetric case may not take long and, yet, may require special skill, as in placenta prævia, or severe muscular exertion, as in a difficult forceps-delivery. The operation of intubation in

obstruction of the larynx requires but little time or muscular effort, yet it calls for very special skill and deftness. That skill should constitute the chief factor in fixing the fee.

The clearing out of an impacted rectum can scarcely be called a brilliant operation, nevertheless, I always have found patients willing to pay a liberal fee for it, because they recognized the fact that it was a most unpleasant one for the operator.

The value, to the patient, of the service performed is, properly, the chief element in determining the amount of the fee. What that value is, often is problematical and yet, in most cases, we have some data for our guidance. In a case of typhoid fever or pneumonia, we may be uncertain whether we have saved the patient's life or not. He might have got well without treatment. However, when we perform intubation or tracheotomy in a suffocating child and recovery takes place, we know that we have saved a life. When we get a good result in a fracture or dislocation, we know that we have saved the patient from being a cripple, and this certainly should have its influence in determining the fee. That the rich should pay liberal fees to make up for the large amount of charity-work done for the poor, is pretty generally recognized, even by the rich themselves, although there sometimes arises a little friction in settling the question as to who are the rich and how high the fee ought to be. The old fashion of the rich patient, that of sending the doctor a honorarium, has nearly passed away, a fact which to me seems regrettable.

In my own experience, there have not been very many occasions when I have been the recipient of a honorarium; still, when I have been so fortunate, the amount always has been more than if I had sent a bill. Besides, there is the good will of the patient—which is worth much.

The profession in general probably have little idea of the abuses that have arisen in our large cities in connection with this matter of charges to the rich. Without reflecting in the slightest degree upon the legitimate specialist, I violate no confidence in stating that there are in this, our city, a number of sharks posing as specialists who are simply confidence-men. I know of an instance where one of them charged a wealthy man \$5,000 for removing his

tonsils. The patient was sore, not alone in his throat, but also his pocketbook, because he knew that the doctor was not one of those who treat the poor gratis, but, who discouraged their coming to his office.

A more flagrant case was the following: Mr. A. is a prosperous merchant of this city. Dr. B. calls himself a specialist, although he never had any reputation as a surgeon. The two men knew each other socially through their families. It became necessary for Mr. A. to have a prostatectomy performed. Dr. B. heard of it and used every persuasion he could command to get the case. Mr. A. finally consented and went to a well-known hospital. The doctor seems to have acquired a weakness of the knees about this time, for, he arranged with one of the internes to do the operation for him for a liberal fee. A member of the surgical staff of the hospital heard that Dr. B. was to do a prostatectomy on a certain date and, never having suspected that the doctor in question was a surgeon, he accidentally drifted into the operating-room at the appointed time. Dr. B. then discovered that the patient was not in condition that day, and so postponed the operation, which was quietly performed a day or two later. When Mr. A. had so far recovered as to return home, he nearly had heart failure at receiving a bill for \$25,000. He called the doctor on the telephone and remonstrated, stating that it had been his intention to send him a check for \$5,000, without waiting to receive a bill, under the impression that that would be a very liberal honorarium. The doctor made the usual excuse, that he treated so many poor for nothing that the rich ought to make it up. The mental shock sent Mr. A. back to bed for a time. In the meantime, this man's wife, who had overheard her husband's end of the telephone-conversation, consulted the family lawyer. A threat of exposure led to a compromise. Just how much was finally paid, Mr. A. did not inform me, but, he intimated that it was less than \$25,000. This case was common talk in one of the big office-buildings several years ago. It was suggested that it ought to be aired by the Medical Society, still, nothing was ever done.

Collections

One of the most difficult problems the doctor has to solve is the matter of collect-

ing, and, because of this difficulty, a great many doctors fail to get the proportion of their hard-earned fees to which they are entitled. I am convinced that a great many lose, through bad debts, from twenty-five to fifty percent of their earnings, and some even more.

Among the reasons for this state of affairs, we may mention the following:

1. The doctor never is sure of his time and, so, is prone to neglect his bookkeeping and the sending out of bills at regular intervals.

2. Few doctors are sufficiently versed in bookkeeping to devise a simple system of books adapted to their business and requiring little writing. So, they go on using the clumsy old-fashioned daybook and ledger, which involves so much work that their posting usually is sadly behind and often neglected altogether.

3. Failure to follow up those patients who pay no attention to a bill sent.

4. Timidity about insisting upon business methods, for fear of offending sensitive patients. The patient who takes offense at business methods needs either to be educated or dismissed.

When we visit a new patient for the first time, we should take it for granted that he will pay cash. When we have written the prescription or prepared the medicine, is the time to say: "That will be two dollars" or whatever the fee is. For a total stranger to expect us to give him credit as a matter of course, is of itself suspicious. The honest man who is hard up will tell us in advance if he can not pay until a certain date.

Dispensing one's own medicine will sometimes help in collecting a cash fee. I say to the patient: "If you wish to pay cash for this visit, I can save you something on your drug-bill, by furnishing you the medicine. I do not furnish medicine on credit, but, shall have to write you a prescription." This obviates the unpleasant experience of finding afterward that a deadbeat has worked me for free medicine as well as the visit.

I think the doctor ought to post his accounts at least once a week and to send out his bills on the first of each month. However, this often will be impossible to a busy man unless he has a system that takes but little writing. Such a system can be devised and is quite feasible. The system I have used for thirty years has been

so satisfactory that I will outline it briefly.

A Serviceable System of Bookkeeping

I keep a visiting-list, in which I enter daily all business done—office and visiting work, cash and credit. I have found the Medical Record Visiting-List best adapted to my own wants. Once a week, this business is posted to a specially prepared ledger. Even a large week's business can be posted in half an hour, owing to the manner in which this ledger is adapted to the visiting-list. I post all business, both cash and credit, so that any patient's account will show a complete history of all my dealings with him. This often becomes a great convenience in after-years. At the end of the month, about two hours of work suffice to get out the bills, because there is no posting to be done.

The keynote of this system lies in the ledger. I have this made to order—ruled and printed on a plan furnished by me to the bookbinder. It is so ruled that I can give a patient a whole page, good for 40 months' business, if he is an old "standby," or any fraction of a page, if he is a "transient." This obviates the waste of space incident to the ordinary ledger giving a page to every patient. Of course, such a ledger is expensive, but, only apparently so, because it will last for years. For a large business, a ledger of 400 pages will last from seven to twelve years and for a moderate business, much longer. My last one, when full, contained over 1,700 accounts, and it constitutes a complete record of my business with all my patients for eleven years.

I have been urged many times to adopt various loose-leaf and card-index systems. However, on careful examination, I have always found that my own plan was more satisfactory to me.

Sending out the bills, is only the first step in getting the money—there must be follow-up action. We should recognize the fact that there are different types of patients, and that each type needs to be handled differently. There is the one (and may his tribe increase!) who only needs to have a statement sent, and settles at the next payday. Then there is the super-sensitive man, who regards the sending of a bill as an affront, especially if the doctor's name is on the envelope, where the postman can see it. One man considers

the doctor's bill only when all other bills are paid. One will pay if persistently dunned; another resents a dun. Lastly, there is the professional deadbeat. I deal with these various types as experience has taught me to be best. For my old families, all that is necessary is, to send a statement of account on the first of the month; I know they will pay as soon as they are able. The new patient, who is a comparative stranger, needs to be looked after. If I do not hear from him in thirty days, I send him a polite but firm note, requesting that he pay something on account or explain why he can not. If he pays no attention to this, I write him a final note, saying that, if I do not hear from him within ten days, the account will be placed in my attorney's hands. I explain that I am perfectly willing to give any reasonable credit, but, that he must take enough interest in the matter to come and see me about it, as I have no time to run after my bills. If this brings no response, I give the bill to my attorney. I never make a threat that I do not carry out.

It is not always easy to find a satisfactory collector. The large collecting agencies have proven less satisfactory in my experience than individual collectors. I have had the best results from young lawyers trying to build up a business. The good collector, like the poet, is born, not made. For several years, I have been fortunate in having one who can collect almost any bill. He is a genius—a marvel of patience, persistence, and tact. For seven years, I have lost almost nothing from bad debts. Now that the war has taken him away, I am desolate.

Any patient who once has made trouble about his bill should be refused further service except for cash.

Suing for bills should be avoided as much as possible. Unless the bill is large and the patient responsible, it does not pay. The law unfortunately is all in favor of the deadbeat, while the labor-unions have enough political power to block every attempt to change it.

Saving and Investment

Doctors are notoriously easymarks for promoters of dazzling financial schemes, such as gold, silver or copper mines, besides many other forms of sudden accumulation of wealth. Most of these schemes are deliberate swindles. The

mines exist only on paper and never are developed. A few of them are *bona fide*, but, are undertaken by men with no experience in mining; hence, are doomed to failure. I have known many doctors to invest in such schemes, but, very few ever saw any dividends. It is simply throwing money down a rathole. Why do doctors do the very thing they condemn in the layman who consults a quack? The medical profession has poured thousands of dollars into the pockets of financial quacks, instead of seeking the advice of their bankers or other legitimate financial advisers. A good investment does not have to peddle its stock around by means of glib-tongued promoters, because there is always plenty of capital available for a sound enterprise. Backbone enough to say "no," and mean it, is the best defense against the siren-song of the promoter.

As soon as a doctor has a living-practice, he should begin to save, even if at first the amount be small. Five dollars a month looks like a trifling sum, too small to be worth while as a provision for a rainy day. For all that, it is quite surprising what it will amount to if regularly put into the savings-bank and resolutely left untouched in the hour of temptation. Every little while the accumulation can be invested so as to bring approximately 6 percent. At the end of ten years this will amount to over \$800; in twenty years, \$2,300; in thirty years, over \$5,000. Of course, this is not riches, still, it is worth while. How many doctors, after thirty years of hard work, have \$5,000 ready cash, besides their other investments? It simply needs backbone to set this little aside and leave it untouched.

For general investment, farm-mortgages

and municipal bonds are, probably, the best means of combining safety with a fair rate of interest.

The doctor should have life insurance; however, too many overburden themselves with heavy endowment policies. I think it is better to stick to a straight life insurance, because one gets so much more protection for the same money. The endowment policy combines the principle of the savings-bank with life insurance, although you really get but small interest on the savings part of it. Better keep them separate and invest your savings yourself. What I mean is this: If the straight life premium is \$20 per \$1,000 per annum and the endowment premium is \$50 per \$1,000 per annum, it is better to take the straight life insurance and invest the other \$30 in bonds and mortgages. You will have more money in the end. This is, of course, on the presumption that the \$30 *will* be invested and not frittered away.

If a man needs to tie himself up in order to save, then endowment insurance is a good thing. Once more, it is a matter of backbone. Saving always is.

Many doctors think they must own a house. They look upon rent as money lost, forgetting that, in owning a home, the interest on capital is lost in the same sense. If the interest on capital plus taxes, insurance, repairs, and depreciation is still less than rental, then it pays to own; always provided that a foreign population does not come in and overwhelm the neighborhood, in which case a home may prove a total loss. I have known many doctors to lose all their savings in this way.

(To be continued.)

2920 Warren Avenue.

The Treatment of Chronic Diseases

Diseases of the Nervous System

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[Continued from June issue, page 446.]

Meningitis

(*Leptomeningitis, Cerebrospinal Meningitis, Spotted-fever, Tuberculous Meningitis*).

SINCE the general underlying pathology of meningitis, in all of its forms, is essentially the same as that of encephalitis,

with which it is almost invariably associated, it may be said, in general, that its treatment is essentially the same as is that of inflammation of the brain.

As in the former disease, so in meningitis, especially in the acute and the cerebrospinal varieties, the aim of treatment in the early stages (where alone treatment

holds out any hope) should be, to relieve the congestion in the pia mater and the cerebral tissues, and to equalize circulation throughout the body. And the detailed means by which this is to be accomplished are precisely the same; namely; cold to the head, heat to the extremities and abdomen; warm enemas every six hours or so; and frequent tepid spongings and friction of the skin. A brisk purge and intestinal disinfectant, to be followed by a laxative saline, given on exactly the same principles as in encephalitis. The drug-treatment is, in all respects, the same as in the former disease, to which the reader is referred. All that remains, therefore, is, to outline, briefly, certain features of treatment that pertain, respectively, to the special forms of meningitis.

Simple Acute Meningitis.—Inasmuch as this form of meningitis is unquestionably a mixed infection, precipitated, as a rule, by some special infective microorganism, such as the pneumococcus, the Klebs-Loeffler bacillus, and others, it is good treatment to inject appropriate mixed serums, as indicated by a bacteriological examination of the cerebrospinal fluid. Or an autogenous vaccine may be prepared from this fluid.

It is characteristic of meningitis that the serous effusion into the arachnoid spaces is exceedingly profuse, because the pia mater membrane is itself inflamed, and the pressure-symptoms of the effusive stage are, therefore, likely to be extremely severe. Relief from these symptoms can be partly attained by judicious puncturing of the lumbar segment of the cord. The best method of doing this is, to perform lumbar puncture on alternate or even successive days, abstracting not to exceed 10 mils (Cc.) of fluid at a time. The physician will, of course, govern himself by his observation of the pressure under which the fluid flows from the puncture as to whether further puncture is necessary.

Tuberculous Meningitis.—This variety requires rather different handling than does the other, because all its manifestations are modified by the presence of the underlying tuberculosis, which not only gives us a distinctive pathogenic element in the morbid picture, but, subtracts materially from the natural resistance of the patient to the meningitic processes and prohibits our making any vigorous calls upon

his physiologic defenses. The drastic defervescent measures recommended in encephalitis are not applicable here. We have not to do with a sthenic, but, with an asthenic condition.

Patients having tuberculous meningitis are peculiarly sensitive to sensory impressions. Consequently, they should be removed at once to a quiet darkened room. The two chief indications in treatment are, to cleanse and disinfect the gastrointestinal tract and to build up the patient's resisting power. The first of these should be carried out by means of the measures recommended in encephalitis, which, however, must be pushed more thoroughly and continue longer than in that disease or in the more acute types of meningitis.

The second indication is the more important. As in general tuberculosis, so in tuberculous meningitis, the main problem is one of feeding the patient. Unless this can be done, and, when it no longer can be done, the case is hopeless. Indeed, as we know, virtually all cases are hopeless, anyway. But, so long as the patient can be made to take nourishment, the physician should persist in his attempts to influence the disease favorably. When he no longer can do so, then further treatment is only a futile prolonging of the agony and a useless aggravation of the patient. This forced feeding must, of course, consist of nourishing, easily digested fluid diet, of which milk and eggs should form the basis, and should be fed as much and as long as possible by the mouth, in teaspoonfuls, great care being taken that the child does not choke itself. If necessary, it may be given in the form of nutrient enemata.

Of medicines, there are very few, indeed, that have any influence upon the course of this variety of meningitis. Creosote, which is theoretically an ideal drug, in practice, is inadmissible, because of its deranging effect upon the stomach. Iodide and the lactate of calcium are, undoubtedly, the best constitutional remedies, and should be given in full doses in a little milk. Nucleins are useful to combat the anemia, and may be given intravenously, if desired. Lecithin, in small doses of not to exceed 1-2 grain twice daily, helps to build up the nerve-tissues of brain and spine; but, this is indicated in the convalescent stage (if this ever is reached) rather than for the disease itself; that is to say, at a period

when reconstructant remedies are indicated, in addition to nourishing foods.

Symptomatic conditions dependent upon the underlying tuberculosis must be met as they arise. Indeed, it is important that the physician should bear in mind all the time that his patient is really a tuberculous patient—that his condition really is an acute exacerbation of tuberculosis—and should govern himself accordingly.

Lumbar puncture is of no value at all in tuberculous meningitis and should never be practiced, once the diagnosis is established.

Acute Myelitis

(Inflammation of the Cord)

The difference between diffuse and transverse myelitis is one of area, not of general pathology; hence, the treatment of the two varieties is the same and may be discussed under the same head.

It is to be observed that the physiologic pathology of myelitis (which is all that we can hope to influence by our treatment) is essentially the same as in the acute inflammatory diseases which I already have discussed; the only difference being that the field of activity has been transferred from the brain and its serous membranes to the gray matter of the spinal cord, so that there are certain variations in the morbid process, because of local conditions. Chief of these variations are, first, the absence of profuse effusion, because no serous surface is involved in the inflammation, and, second, the rapid occurrence of pressure-necrosis in the neurons, owing to the crowded condition of the cord in its bony canal and the microscopic smallness of its vessels. For this latter reason, the process is a much more difficult one to reach with remedies than are the acute inflammations of brain and meninges.

Rest—complete anatomic and physiologic rest—is the *sine qua non* of treatment in myelitis. The patient must be put to bed at once and kept in a horizontal position; if the case is a severe one, he should be slung in a hammock, so as to take every vestige of tension off the vertebral column. Cold or heat, according to the reactive capacity of the patient, should be applied along the spine until the active inflammatory symptoms subside. The practice of blistering or cauterizing the back along the path of the spine has never appealed to me, at least in ordinary cases of acute myelitis. I doubt whether it does any real good even

in the chronic form. All the influence we can hope to exercise by stimulation of the skin is an indirect, derivative one; and this can be achieved just as well by heat and cold. Some patients do better under hot, some better under cold applications, while still others do well under alternate applications of heat and cold.

The pain and jactitation associated with myelitis usually demand special medicinal attention. Opium should not be given unless the severity of the pain absolutely requires it—which is not often. By far the most effective drug for the relief of this spasmodic condition is, gelsemium, which may be given in 5-minim doses of the tincture, in conjunction with whatever other remedies are being prescribed. Not only does gelsemium, by sedating the skeletal neurons, quiet the pain and jactitation, but, it exercises a favorable influence upon the hard rapid pulse that characterizes spinal inflammations. This quality of pulse results from the irritation of the sympatheticus through the cervical ganglia, and gelsemium is a sovereign antispasmodic, in this respect.

Of the drugs that act most directly and favorably upon the congestive process in the cord, veratrum must be accorded first place. It should be given, in small doses, from the beginning of the disease until all acute symptoms have subsided. Thus used, it is a perfectly safe drug and most benign in its influence upon the circulation and the nervous system, too. It is, in fact, besides gelsemium, the only remedy that exerts any influence upon the disease; and when these two have been exhausted we really are at the end of our therapeutic resources so far as the acute stage is concerned.

When the acute stage has subsided and the disease has become chronic, we may try to promote absorption of the infiltrated exudates in the cord by giving protiodide of mercury in small doses, say, 1-20 or 1-16 of a grain. Ergot also assists in this absorptive process, by toning up the spinal capillaries. It, too, should be given in very small doses, not exceeding 1 grain of the extract.

It is, of course, important that the intestinal tract be kept clean and aseptic throughout the entire course of the disease by the use of intestinal antiseptics and saline laxatives. There is great tendency in myelitis to constipation, and this must be persistently combated by the judicious

use of peristaltic stimulants, of which strychnine may stand as a type. At night, 2 grains of phenolphthalein, followed in the morning by a laxative saline, is an excellent disinfectant.

After all, however, the main object of our therapeutics in myelitis must be directed toward forestalling as much as possible, and providing for, the complications which are almost sure to arise. Chief among these complications are the appearance of bedsores and paralysis of the bladder. The greatest care must be taken to change the position of the patient at frequent intervals and to keep those parts of the body that are subject to pressure well hardened with alcohol. Most myelitic patients sooner or later enter upon catheter-life; but, this should be warded off as long as possible, every effort being made to incite the bladder and urethral muscles to natural activity, and every precaution being taken to maintain the asepsis of the urine.

Hexamethylenamine, in 2-1/2 to 5-grain doses with plenty of water, not only serves as an excellent urinary antiseptic, but, is supposed to exert a favorable influence upon the spinal fluid. My experience is that uva ursi, 15 to 20 drops of the fluid extract, is even a better agent than this and may be given for much longer periods without causing irritation. When it becomes necessary to catheterize, the greatest care must be taken to do it under strict aseptic and nontraumatic conditions. The same precautions of cleanliness apply to the care of the bowels, which are so frequently the subject of involuntary movements.

The role of electricity in acute myelitis is limited, as in poliomyelitis to the preservation of the nutrition and tone of the affected muscles, pending such restoration of the neurons as is destined to take place. The proper time for its employment, therefore, is immediately after the subsidence of the acute symptoms; and the proper form of application is that of galvanism. It may be continued for two or three months, after which time it is futile, because by that time whatever restoration of neurons is likely to occur will have taken place; and electricity has no direct influence upon the spinal neurons.

The feeding of the myelitic patient is somewhat of a problem. It is important that he should be well nourished, still, his

condition is not such as to favor digestion or metabolism. Hence, his diet must be nicely adjusted, so as to yield the maximum of nutriment for the minimum of waste and elimination.

Poliomyelitis

(Acute Anterior Poliomyelitis. Infantile Paralysis.)

Modern revision of our concept of this disease has practically classified it as a sort of composite process of encephalitis, meningitis, and myelitis, differing in type as one or other of these three elements predominates. Its distinctive features are its virulent causative microorganism and the indiscriminate irregularity with which it attacks the gray matter of the various parts of the nervous system.

The treatment of poliomyelitis, therefore, resolves itself into the treatment of the three preceding diseases, adapted to the particular type of the affection that is under one's hand at the time. If the encephalitic element predominates, then the treatment is that of encephalitis; if the meningitic element, then the treatment of meningitis; and if the myelitic element, then the treatment of myelitis. Despite the recent recognition of these different forms of poliomyelitis, the spinal type still remains by far the most common, and this type, according to our present knowledge, may be regarded as a highly infective, a typical form of myelitis. Hence, in these ordinary spinal forms of the disease, the treatment is essentially that of acute myelitis.

This identity of treatment extends to the use of electricity after the acute symptoms have subsided, and for the same purpose, namely, to preserve the nutrition and irritability of the muscles pending the restoration of the degenerated neurons. Since the muscles usually have lost their normal reaction to the faradic current, it is plain that the only current that is of any avail is the galvanic, to which the muscles will respond direct. Massage, properly applied, has also a good effect upon the nutrition and activity of palsied muscles and should be employed. But, to be of any benefit, it must be carried out by a skilled masseur and not be entrusted to the parents or nurse, whose rubbings are wholly ineffective.

In spite of our most careful treatment, there will generally remain a residue of

muscular atrophy and neuronie destruction that will call for artificial support by means of braces and perhaps even for operative procedures. This, of course, becomes a question for the orthopedic surgeon to decide.

Neuritis

(*Multiple Neuritis. Peripheral Neuritis. Beriberi. Lead Paralysis. Alcoholic Neuritis.*)

The treatment of neuritis is, in general, the treatment of the underlying conditions. If the exciting cause be removed, even in the severest cases, the neuritis always shows marked improvement and in the less severe cases gets well. On the other hand, one may treat the neuritis ever so assiduously, yet, if the underlying disease be neglected or overlooked, the nervous disorder obstinately persists. It is important, therefore, that the physician make himself acquainted with the history and details of the trouble, in order that he may intelligently shape his therapeutic measures.

Simple Multiple Neuritis.—This form of the disease is a simple mixed infection, similar to influenza, whose germ, indeed, is often one of the causative agents. It may, in fact, be said to bear about the same relation to the peripheral neurons that muscular rheumatism does to the musculature. The morbid agent of rheumatism, whatever that may be, is unquestionably the commonest morbid agent of simple neuritis. Hence, the treatment of simple multiple neuritis is about the same as that of rheumatism.

The two prime factors in the cure are, rest and heat. Without these, no medicinal treatment is of any avail. With them, medicines often can be dispensed with. The patient should be put to bed, no matter how mild the attack, and dry heat, in the form of hot blankets or electric pads, should be applied to the extremities. These applications are to be maintained as long as there are any signs of active inflammation. In occasional, very severe cases, where the temperature was very high and the inflammatory process exceptionally violent, I have used cold instead of heat; but, only temporarily; and I do not recommend it as a routine practice in ordinary cases.

The same measures are to be employed for the depletion and disinfection of the

intestinal tract as have been insisted upon in the treatment of other inflammatory disorders, namely, frequent small doses of calomel, ipecac, and phenolphthalein, with saline laxatives in the morning.

The pain of neuritis always is severe and requires special attention. The hot applications help to allay it. In exceptional cases, opium may be necessary, although it should be withheld wherever possible, not only because of its habit-forming dangers, but, because it is positively antagonistic to the curative process. Gelsemium, in 5-drop doses of the tincture three or four times a day, usually will effect sufficient physiologic rest for the neurons to control the pain from the inside; and veratrum is an excellent local application as an external anodyne.

In the way of internal general medication, veratrine and sodium salicylate or aspirin are ideal. The former drug dilates the systemic capillaries and slows the heart, thus equalizing circulation and relieving the congestion of the neurons; the latter exerts a specific influence upon the toxic agent. If the patient is asthenic, digitalis or tiny doses of strychnine may be added; but, strychnine must be prescribed sparingly in the active stage. It should not be forgotten that in neuritis, as in rheumatism, the blood usually is loaded with effete matter, which often is the cause and always the aggravator of the neuritis. It is, therefore, advisable, intercurrently with other treatment, to give colchicum (5 drops of the tincture), and lithium benzoate (5 to 10 grains), for the purpose of unloading this effete matter.

As soon as the acute symptoms subside, electricity should be employed, the mode and degree to be determined by the reactive capacity of the nerves and muscles. At first, galvanism is about the only form that is available; but, as soon as the reaction to faradism begins to be established, this form should also be employed, and both should be persevered in until recovery of sensory and motor power.

Alcoholic Neuritis.—This is by far the most hopeless form of neuritis; first, because it is almost impossible to remove the underlying alcoholism; second, because the degeneration of the neurons is interstitial; and, third, because the walls of the capillaries are hopelessly sclerosed and the vasomotor vesicles relaxed. The chances of

curing the neuritis are precisely proportionate to those of curing the alcoholism and depend upon the extent and duration of the damage done by the alcohol.

The local treatment is the same as that of simple neuritis. Alcoholic neuritis, however, seldom gives any great degree of pain, since the sensibilities are already dulled and the nerve-centers poisoned. For the jactitation, nothing is better than gelsemium in small doses. Otherwise, the treatment of alcoholic neuritis resolves itself into the treatment of alcoholism.

Lead Paralysis. (Wrist-Drop.) — It is highly important, indeed, all-essential, that the patient should be removed utterly from all contact with the environment which has caused the trouble, and, if possible, be given the advantage of an outdoor life, preferably sea-air. As an antidote to the lead, sulphur and magnesium sulphate should be given as a cathartic and iodide of potassium in fairly large doses as an eliminant. So far as the neuritis is concerned, the

prognosis as a rule is good, provided the environment-factor can be properly controlled. But, of course, the anemia due to the metallic poison is a serious and obstinate matter, for which little can be done beyond supplying good nourishment and fresh air.

Single Neuritis. — Among the single neurites, are included all of the cranial nerve paralyses, occupation neurites, such as telegrapher's and writer's cramp, baseball-pitcher's arm, etcetera, and all purely traumatic neurites. When the nerves involved are sensory, pain is associated with the trouble; when they are sheerly motor nerves, there is, of course, no pain. With this distinction, the treatment of all of these single neurites is altogether the same as that of the types of neuritis considered above, namely, the removal of the underlying cause, employment of dry heat, and the other therapeutical measures recommended under simple neuritis.

[To be continued.]

A Plea for Honest Practice

By F. D. PATTERSON, M. D., Colorado Springs, Colorado

EDITORIAL COMMENT.—Doctor Patterson raises certain serious charges against hospitals and surgeons; charges that, unfortunately have only too much basis in facts. No doubt, many abuses of surgery, and, also, of hospital facilities are perpetrated; yet, we believe that they are exceptional. At any rate, the supposedly transcendental superiority of surgical over purely medical methods of treatment no longer is admitted without qualification. The signs of the times are, we believe, that the family physician is not of the past, but that he will, again, come into his own.

ALTHOUGH in recent years medical science in all its various branches has progressed by leaps and bounds, this progress has not thus far proved to be an unalloyed blessing to the human race; for, with it, there has entered in a most insidious manner a condition which is beginning to assume a serious aspect. I wish to call attention to the abuse of surgery fostered by the multitude of hospitals which we see on every hand, not only in connection with medical colleges, in mining and lumbering towns, and in the larger centers of population, but, also in many of the smaller towns. In their legitimate sphere they are a convenience to the community as places where strangers can be taken care of when sick or injured and in cases where the necessary restraint

can not be provided at home; but, why should a patient leave a good home, to be taken care of in these commercialized institutions? If the physician attending a patient in his home would be more explicit in his directions and take time to write down the minute details of the treatment, much of the existing need of hospitals would be obviated.

The Curse of Needless Operations

However, the worst feature of these institutions is, the needless surgery performed in them, which tends to brutalize the surgeons, to make nonentities of the physicians and bring disaster on the public at large. The custom which so largely prevails, of surgeons paying to attending physicians commissions on referred surgical

cases, can not be too strongly condemned. It causes the general practitioner to lose initiative, by leaning on the surgeon, and, though shifting responsibility, he still can come in for a generous remuneration. Surgeons of nation-wide reputation have all the work they can attend to without paying any middleman's profit: but, it happens too frequently, especially in the smaller towns, that surgical aspirants resort to just such commercialism.

Notwithstanding the fact that surgery everywhere holds the unreasoning masses spellbound, there still remain a few persons who do not wish to be operated upon. As the average physician knows surprisingly little concerning the therapeutic art, he can not give the relief demanded, thus causing many to drift to the irregulars. Many, also, who are abundantly able to pay a doctor manage to "rough it out alone", because, if a member of the medical fraternity is called, he is prone, it is feared, to call an ambulance and hustle his victim off to some hospital. The usual mode of procedure is, to predict for the patient but a short term of hours of life if no operation is performed, and, if possible, to rush him to the hospital before relatives and friends can be consulted. The physician takes it upon himself to make all the arrangements with the hospital and with the surgeon, and the operation is performed at whatever time of day or night it may chance to be when the patient reaches the place. Little or no attention is there paid to any preparatory or after treatment. It may be observed that this extreme haste in taking a patient to a hospital obtains only when he has first-class credit rating or when the price of the operation is paid in advance. Many of us know of people actually having mortgaged their farms in order to satisfy some surgeon's demands.

During my temporary absence from home, my wife with great difficulty saved her brother from an appendicitis-operation, though there really was nothing the matter except that he had strained himself while breaking a colt. The surgeons gave him only a few hours to live unless he were operated upon. That was seven years ago, but, just the same, he is alive and well today. Two years ago my wife's niece was hustled to a hospital, to be relieved of an alleged tumor; the trouble, in reality, being only an overloaded stomach. Not only was a first operation performed, but,

also a second one, and, she returned in her casket.

Notwithstanding the death of this young woman her brother is in a hospital at this writing, having been railroaded there by the surgeons and operated upon for ulcer of the stomach. One ulcer was removed, but, another was treated by merely lapping over the peritoneum. Within one week after that operation, he was given toast, asparagus with its fibrous constituents, and pineapple and immediately suffered intense agony from such criminal indiscretion about his diet. In view of the fact that the second ulcer was treated by only lapping over the peritoneum, such diet as that arouses one's suspicions that the surgeons were hoping for a second operation. As gastric ulcer is a self-digestion due to lowered vitality, what more reckless thing could be thought of than to give the patient pineapple, with the digestant that its juice contains? This hospital was, by no means, in an obscure country town, but, was one of the fine hospitals in a medical center.

On account of overrating the advantages of hospitals, medical practice now tends to centralize in the cities. Before the days of good roads and motor ambulances, physicians in the smaller towns and remote country districts had the opportunity of developing their own initiative and of successfully meeting emergencies that would baffle the average city doctor; but, now, nobody who has the price of an operation, however remote from a city he may be, is safe; for, if he is injured to the point of losing consciousness he is liable to be pounced upon and hustled to a hospital. There are right now in the immediate vicinity of Colorado Springs several little towns without resident physicians, notwithstanding the fact that there are rich ranchers all about them. In former years, physicians used to do well in them, now, however, they are deserted by the medical profession, because the noses of the people are turned toward the city hospitals. In those small towns that have resident physicians, these latter stand in with the city surgeons and with them are leagued in a conspiracy against the public, in the interest of private graft.

Outside of accident-cases or perhaps an occasional strangulation of the bowels, as we have observed among those who could not or would not be operated upon, there is

no need of such a violent hurry to operate. If there were, how could so many patients live long after the allotted time given them by the enthusiastic would-be operators? Surgery is a fad, and people, like cattle, can be rounded up and lured on to their destruction.

What Causes This Condition?

Let us look a little into the causes that have gradually led up to this state of affairs. The fee-bill, with but slight modifications recently made on account of war prices of supplies, originated at a time when a physician could practice after a few months of study with a preceptor or, at the most, after a year or two in college; at a time when the cost of medical education and equipment was but a small portion of what is now required; at a time before modern sanitation had so greatly diminished the work of the practicing physician by eliminating the oldtime epidemics of acute infectious diseases and when the purchasing power of a dollar was several times as much as at present. Just think of it! Is it not a most stupendous blunder to have a physician's compensation placed at a certain fixed amount per visit? A physician, therefore, cuts his own throat whenever he perfects himself in the therapeutic art.

A doctor of my most intimate acquaintance, whose office adjoined mine, was treating a case of furunculosis with vaccines from various staphylococci. Upon my asking him why he did not give his patient a good action of the bowels and saturate his system with either calcium sulphide or with echinacea, he replied that, if he should do so, he would cure his patient with only once or twice seeing him and thus get very little out of the case; hence, the more prolonged and expensive line of treatment. I have known health-officers in some of the smaller towns to be negligent in controlling epidemics from which they were reaping rich harvests, while recently, upon the death of a neighboring physician, I felt impelled to drop some of the practice that I fell heir to because of being unwilling to take the same chances with the Harrison law such as the deceased had been taking. Upon closely questioning these drug-users, it was found that they owed their downfall to the reckless prescribing of narcotic drugs by physicians. What else can we expect under present conditions? Here, with big sur-

gical fees and commissions as a bait, is the mad rush into the profession, while medical fees are by the visit and at a rate far too low to meet the increased cost of living.

Notwithstanding these facts, the blame does not, by any means, rest entirely upon the medical profession, for, the people have in a great measure brought these evils upon themselves. If a physician does his conscientious best by his patient, he may get his pay and he may not; but, if he turns the case over to the surgeon, the latter's fee must be forthcoming before the patient goes onto the table, and the physician then and there receives his commission. Also many ailments are curable either by an operation or by a long course of less heroic treatment. If a patient commences with such a course of treatment and prematurely discontinues, naturally, the physician considers feeding the next similar case to the surgeon, or, if he has sufficient nerve, of himself operating.

Why Should Not the Family Physician Operate?

In fact, where surgery is necessary, why should not the family physician now, the same as formerly, do the operating? He has had practice in the surgical laboratory and has seen many more clinical cases than did the physician of old. At best, asepsis is only an approximation. When we consider the outbreaks and other infections that from time to time occur in hospitals, does a hospital, in the long run, as a place for surgical work, have any real advantage over a private dwelling where cleanliness obtains? The sutures come ready prepared, and the instruments and dressings can be sterilized by boiling or steaming for half an hour; but, what surgeon is there who is willing to subject his hands to such treatment? Even rubber gloves, though well sterilized, can not be otherwise than slightly contaminated in fitting them on, as the best that can be done with the operator's hands is, to thoroughly wash them, immerse them in antiseptic solutions, lock in as many germs as possible by the astringent action of alcohol and leave the patient's system to take care of the remainder.

It has fallen to my lot, on several occasions, to perform in private dwellings such operations as trachelorrhaphy, perineorrhaphy, various amputations, curettement of bone where necrosis had set in, and others that in times past were the prerogative of

the family physician; and never yet have I had any trouble from infection. In one instance, however, I had a severe case of shock to contend with, which came on twelve hours after the operation. The use of strychnine, aromatic spirits of ammonia, glonoin, and atropine, together with hypodermoclysis and frequent small rectal injections, saved the patient. It had so happened that I had had to come ninety miles to perform that operation and could not get a train back that same day. Consequently, I had to stay over night at the patient's residence. Had I not been so placed as to give my whole time to this one patient, here would have been a surgical fatality. Comparatively few die on the table, shock usually being a later complication.

One very strong argument why the family physician should perform the necessary surgery is, because he can give his patient the necessary preliminary and after treatment that the surgeon does not give, especially when so busy with surgical cases that he has the anesthesia started on another patient before he has completed his operation on the first. Also, for his own reputation as well as for the welfare of his patient, the family physician will be more careful in determining its necessity before performing the operation.

So many appendicitis-operations were unnecessarily performed, that a year ago there was pending in the legislature of South Dakota a bill requiring every removed appendix to be sent to the state laboratory, and, if it was not found to be diseased, the surgeon could not collect his fee. In fact, no such operation would ever be necessary were every case properly treated at the start. Whenever an intense pain starts in the umbilical region and centralizes at McBurney's point the patient should have rest in bed, receive saline cathartics, and cholagoges, and the pain be controlled with hyoscyamine or, in the worst cases, with codeine—never, though, with morphine, as the latter tends to mask the symptoms. Symptomatic treatment and light diet during the incipency of this ailment will prevent necrosis and suppuration and, consequently, the subsequent need of an operation.

In fact, even developed peritonitis is, by no means, always a surgical disease. No operation should be performed unless defervescent treatment, saline cathartics, sat-

uration with calcium sulphide or echinacea, together with absolute quiet, had been given a fair trial. I have had experience with a case of peritonitis in which the patient, with a temperature of 105 degrees, recovered without an operation.

No mastoid operation will ever be necessary if at the start the ear is syringed with mild antiseptic solution; and calcium sulphide, hexamethylenamin and sodium benzoate, administered internally.

Of late, lacerated cervix can be cured by the cataphoretic use of thiosinamin, as described in my article in the July, 1916, number of this journal. Piles, fistulas, urethral and prostatic diseases are all amenable to various uses of the galvanic and high-frequency currents. In any condition of fibrosis, one need never lose sight of the internal administration of chromium sulphate, a most valuable, though much-neglected, remedy. Very few, indeed, are the cases of tonsillitis that can not be cured by the local application of tincture of iodine or by the use of positive galvanism. Still, as a last resort, why should not the family physician remove the offending tonsils? Why should he not operate for hydrocele, perform necessary circumcisions, remove small external tumors, and do whatever other minor surgical work may come to him? Why should the careful physician falter at surgical procedures of even greater magnitude? The technic is simple. If only major operations were performed by specialists and general practitioners either cured by other means or operated when necessary in minor or medium-grade operations, small, indeed, would be the work of the surgical specialist if he performed no unnecessary operations!

Governmental Control

The city of Zurich, Switzerland, has, for years, had its quota of municipal physicians, and since the outbreak of the war some agitation has been going on in England concerning the taking over of the medical profession as a public utility, the same as are the police and fire departments of a city. That can be done with but very little expense to the individual member of the community, as evidenced by the contract practice in vogue in mining and lumbering communities. A small amount is taken out of the wages of each worker, nobody notices the expense, and thereby

abundant medical and hospital facilities are provided for all. Were such an arrangement extended over the entire community, everybody, regardless of financial condition, always could receive proper attention in case of sickness or accident.

To avoid graft, it is imperative that the government should supervise and control medical education, giving more complete and thorough instruction in therapeutics. Under present conditions, it is shocking how little the average practitioner one meets in counsel knows about the physiological action of drugs. Medical colleges supply the demands made upon them, in the kind of instruction imparted. At present, it is principally for surgery. Should the pendulum swing in the other direction, it will be more for therapeutics. This universal ignorance of therapeutics explains in a very great degree the alarming death

rate among the soldiers, in the various cantonments, from acute infectious diseases. Especially is this evil augmented by the fact that so many young and inexperienced practitioners, some of them even ungraduated and knowing practically nothing about therapeutics, are with the colors, occupying responsible positions.

The time soon will come when we shall have to fight the graft in our profession as we have fought chattel-slavery and the liquor-traffic; for, conditions are such that, when a physician speaks out his honest conviction that he can cure a patient without surgery, he is considered either a fool or a crank. The ways of right and justice always are unpopular, until the crisis is reached. However, let us stick to the straight and narrow way and do our part toward the elimination of dishonesty and graft from our noble profession.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[Continued from April issue, page 288.]

PREGNANCY was not a conceivable symptom to those who knew this emaciated victim of consumption. On the other hand, the keynote of labor-pains was the first greeting that arrested my attention and started me to work on that line, not caring whether the patient was a skeleton or a fat woman. After that, faith in the native profession was badly shaken—unreasonably so, it seemed to me, under the conditions and circumstances obtaining and of which, as said, I knew nothing to divert me from the correct diagnosis that was thrust upon me.

The Successful Quack

One time I had under treatment a very peculiar Irishman, a quack-doctor, who came to me from a distant town to seek relief from blood poisoning. He had escaped, by the skin of his teeth, from becoming an English prisoner, for lawless Erin patriotism, and landed with but five dollars in the town where he lived, and there set out to make a living by his wits. Besides possessing native shrewdness, he was well educated and had formed some nice associa-

tions. He told me that he had wandered the streets of the town with no hope better than the slavery of a common laborer. Finally he saw the sign of a doctor's office, and that it was for rent. The rental, he found, was two dollars a month. Quickly resolved, he planked down two dollars, then put his head to woolgathering. He opened up.

Directly a young woman appeared, with timid reluctance, and told him that she feared being somewhat in a bad way. He asked her whether she had been coquetting imprudently, with the boys, and she admitted that he had guessed it first pop. He then inquired as to her financial abilities, and was informed that she was the happy possessor of twenty dollars. Funny, that just happened to be what he would charge her for his unmatched services and received. The lass meekly parted company with her twenty. He then advised her to go home and drink a quart of cold water and not to urinate, under any circumstance, till she came to see him again early the next morning. At that interview, he told her to repeat the quart-dose of water, with the same injunction, and come back early the next

morning. But she was on deck that same afternoon, vowing she could hold on to her water not a minute longer. Feigning dismay, the budding obstetrician informed the erring Eve that the game was lost, for, his plan had been to drown that little son of a b——, but that under the circumstances there was no remedy left that would not cause her terrible pain and most likely kill her.

Not content to rest on his oars, our enterprising and resourceful Irishman wended his way to a big drug store and invested the greater part of his twenty-dollars capital in household-remedies and arranged them in his office so as to make quite a little show; and this move drew him constant small custom. The aforementioned druggist also had given him an English pricelist of active-principle tablets and granules, together with instructions how to employ them, and, after going over the matter, he got the druggist to order for him a selection of these.

The man's education and natural intelligence gave him some insight into the mysteries of correct medication, and the prevalent fevers, diarrhea, and dysenteries were so nearly of the same type that the knowledge of varying treatment was not vital, on an average, while he prudently kept on the safe side of the dosage. As it was, he was sure of better results than men of the regular profession would have with their drugstore trash and slops. And he was unreasonably successful from the start with the new medication, and soon became the leading and most-sought doctor of the community. I might recount a hundred of this man's pithy stories, of tilts with the regulars, and the tight places he sometimes got in, but, have other items for the space I might fill with his doings. He died while in my care, his condition being too far advanced when he came to consult me.

The Pathetic Story of a Brokendown Doctor

An elegant young Irish doctor came to me with letters from Paris, that certified him to have royal blood in his veins (although tainted with treachery) and with a medical education second to none of any who ever had left Paris. He was a physical wreck, consumptive, and the victim of every imprudent dissipation and vice that money could buy. He had lived fast and furiously.

I relucted to ignore my repugnance for so much intelligent accomplishment so reck-

lessly sacrificed and fain would have declined the proposition to assist him—that is, not financially, for, he had stacks of money at his command—but I was loath to become the sponsor for a brilliant man who had no respect for himself. I abhor drunkenness to such a degree that I refuse to diagnose or prescribe for a man while he is on a spree, and in that way have lost thousands of dollars, inasmuch as many of such men did not come to me when sober, the drink causing them to seek medication they did not need, but they would pay recklessly while drunk. But there was such a spell of pathos in the lackluster eyes and charm of suave eloquence in the soft low voice of plaintive entreaty that I could not steel my heart to turn to him a deaf ear and send him away with indifferent coldness. I really felt sorry for his monstrous sacrifice of a nobility of manhood superlatively admirable; yet, for him, the pitiful bud of blighted promise and withered hopefulness, I had an intense sympathy that no mere words can measure. I thought of myself in the giddy whirlpool of the maelstrom of Paris, whose seething tide, which I so luckily escaped, had engulfed him. Poor boy! Maybe he was as zealously earnest as I had been, but was more irresistibly tempted. I could have wept for him, had there been tears left in mine eyes for me to shed.

And I sent him away to the dry highlands, showing him, by the sketching of a crude map, where to build him a modest house on the summit of a rolling hillock, a mile away from a hamlet where once I had labored for a while and where now a doctor would find healthful work to do. There the balsam-laden zephyrs, sighing from the far-away Pacific, sang their soothing lullabys in lofty branches of the long-leaf pine, gently fanning the feverish brow and softly whispering of health and hope. And how I had been fondly longing a thousand times for that delicious retreat while suffocating beneath the burning glare of this relentless torrid sun. He recovered a tolerable existence and lived comfortably for ten years in that balsamic atmosphere where consumption was never known to breed, till eventually double pneumonia caught him off his guard and snapped his delicate thread of life ere he had time to put up a proper defensive fight.

Why These Reminiscences Are Written

These little fragments from the ragged edge of the past creep in upon me haphaz-

ard and are jotted down, informally, and without system, more as an index to the multitudinous vicissitudes I have passed through during the long lapse of half a century of restless activity, than as a history of a life's experiences that would fill more books than any pressure of duty could actuate me to write.

Indeed, it is difficult for me to become persuaded that I really owe any such duty as this, or that the work performed may possess any great value when completed. To me, its more serviceable feature should be that which inculcates principles of health and long life and the human capacity of extreme endurance under trying ordeals of professional peril; while, mayhap, the weaknesses of human nature recorded—painful for me as, at this late day, it may be—may cause some reckless youngsters to pause and to ponder the pitfalls to which the downward grade inevitably leads. At all events, I am doing the work, for better or for worse, with correct, if reluctant, conscientiousness, willing to persuade myself, even against what seems to me my cold and rational judgment, that it may do some good, someway, somewhere. The equivalent of this effort would have been of great service to me sixty years ago; yet, never will my eyes have seen anything like this ideal until this autobiography shall be finished, provided I am spared to see the final page of the book placed where it will belong.

A Glance at Current Events in Mexico

But now—and now—in the searing, torrid days of July—just fifty-three years today since inebriate Americans were slaughtering and mutilating one another on the plains of Manassas—now in July, 1914, that the treaty of peace between the United States and Mexico has been signed, the better class of Mexicans living around me, Mexicans who have never participated in any of the revolutions, are rising up in rebellion, actuated, by what motive I am unable to learn; nor does it seem to be public what their pretensions really are. I presume it is, to demand speedy peace.

The head and front of this new movement are wealthy men, educated in Paris and in the United States, who have suffered seriously at the hands of other rebels, and who have been absent from their ranches most of the time. One of the prominent men of this class who had ventured back to his plantation was recently killed there,

shot like a condemned soldier, in the presence of his family, by oldtime rebels who seem to be uniting with the newfledged rebels of the wealthy and influential classes. The garrisons of federal and state troops have retired toward the interior, not pursued, as yet. It is said that the new dispensation will permit no looting nor brutal killing, nor the arrest of people in their regular daily pursuits. In some later chapter, I may be able to indicate what this new departure means.

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Mental Power Sways Medicine

"Eternal spirit of the chainless mind"
The noblest sentiment ever lisp'd in any tongue Chillon's dungeon inspired in the grandest erratic brain that ever throbb'd on earth—the loftiest spirit estranged from heaven, wandering without anchorage through the Universe! Byron! thou deathless symbol of human suffering and immortal wo! Promethean marvel of truth: "I never knew you; depart from me, ye that work iniquity!"

I am thankful that I have a different conception of God. I maintain that all that is noble in man, all that is pure, loving, and charitable, and forgiving, even justice, if you will, multiplied a ten billion times, would give us but a faint conception of the love, truth, and tenderness of God.

Think of the story of Mary Magdalene and the parable of the prodigal son; of Christ's agony in the garden of Gethsemane, of his yearning love to man and his glorious death for our sake. We are forced to believe in a Divine Being whose attributes are love and compassion—not, a retribution so cruel that it partakes of revenge. It has been wisely observed that "evil ending in evil would be the work of a fiend; evil ending in good is the work of a just God."

Think for a moment of the incredible wrong that would doom all men, even before birth, to everlasting torture. Conceive of the monstrous injustice of holding a man responsible for the inherited crimes of generations, stripping his afflicted spirit of all hope, and for a lapse for which his mental and moral blindness are in no way accountable, consigning him to eternal suffering! This is the preposterously illogical and wicked belief of those who adhere to the doctrine of Calvin, by whom, as I really believe, the innocent life of Michael Servetus

was sacrificed. We know that such acts of intolerance and narrow-minded bigotry would be impossible in Christendom today. But, why not, unless it be that the hearts of men have been moved to pity by the record of religious persecution and that reason and justice will no longer tolerate the cruel hate which inspired the Genevese theologian?

O, no! it can not be true that "an eye for an eye" and "a tooth for a tooth" have been revived from the tents of ancient Judaism. Christ, himself, refuted them, enjoining us to forgive—not, seven times, but, seventy times seven. Did He not leave the ninety and nine, to seek the one that was lost?

I believe God is often nearer to him who is in the dark and struggles blindly, even on the brink of hell, than to him who, in his moral strength—perhaps the mere fortune of temperament or heredity—has no fear of temptation, knowing not what human passion is like. As you would the more tenderly shield and cherish the child born or become physically or mentally deficient, so, when a man is spiritually weak, perhaps in the infancy of his moral life, God may, in His infinite tenderness and love, bend closer to His erring, purblind child as he gropes his way along the abyss of moral degradation, protecting him with a father's solicitude and care and rejoiced to forgive him over and over again, because of the great love He bears him. All He asks of us is, sorrow for our transgressions and a fervent desire to do His will.

God warns us, through the agencies of reason and common sense, as well as by a more or less enlightened conscience, that, if we transgress certain moral laws, we suffer, though His Father's heart is wrung in witnessing our folly, and His divine love is moved to compassionate solace even though we repeat the offense. To suppose otherwise, would be to conceive of God as the deliberate torturer of His own children—as much more incredible in a Heavenly Father than in an earthly parent, as God's all-embracing love surpasses our own. It is true however, that conscience is amenable to education. And herein man's responsibility is manifest, just as a man living in an intelligent community is held accountable for absolute ignorance.

This is my first sermon, and probably it will be my last. Belonging to a profession which, of all others, is brought daily face to face with the solemn verities of life, the constant contemplation of human suffering has left little room in my thoughts for the abstractions of theological controversy.

A physician who by nature is deeply reverential—though not religious in the narrower sense—will come to ponder far more seriously and, be it said, profitably, than the clergy, the inscrutable phenomena of life and death. It is a tacitly recognized and general principle among physicians, to observe rather than dispute when the profounder themes of life are concerned, their noblest energies being exercised in the world of positive action—not in that of negative theory. If queried as to his belief in Scriptures or his conception of a future life, the practitioner's natural answer might be, "Would you like to visit the smallpox hospital with me this morning?"

Union, Not Separateness

Our ancestors, when they started a new town, set apart a tract of land for a training-field, close by the church. But, after all, the real training-field was in the meeting-house, indoors. Their meeting-houses were the great power-houses from which went forth the spiritual and moral influences that inspired and controlled the whole life of the people.

People say that the Puritans' plan is old-fashioned. But, after all, what does the world need? The world needs more union, and less separation. It needs more of the "together," and less of the "alone." It needs unity of spirit, instead of diversity of form. Everyone should give his countenance, presence, and help in some religious society. Men are working together in other spheres of life: syndicates for good purposes, rings for bad purposes, caucuses for politics, societies for reform are the special signs of the times.

A man may ask, "What good will it do me?" We want to say that no one can help himself much unless it is in his heart to help his fellow men.

Where is the home in civilized land that has not felt the benefit of the work of poetic genius! What victim dost thou animate this present night?

[To be continued.]

What Others are Doing

DICHLORAMINE-T FOR EYE INFECTIONS

Many antiseptic agents have been used, with more or less satisfactory results, in the treatment of infections of the cornea and conjunctiva. As a rule, none of those heretofore employed seemed to exert a very powerful germicidal action, and for this reason in many ocular infections they have not been particularly effective.

Drs. A. S. and L. D. Green, of San Francisco, in an article published in *The Journal of the American Medical Association* for April 27, announced the exceedingly interesting discovery that Dakin's new oil-soluble antiseptic, the dichloramine-T, can be used safely as a conjunctival antiseptic, without danger to the tissues, and with exceedingly satisfactory results from a therapeutic point of view. They have been using the dichloramine-T in 0.5-percent oil-solution, instilling it every hour, about three or four drops being used at each application. The instillations cause some smarting, which, however, lasts only a moment or two and is easily borne even by children.

In this paper, several cases are reported, the first being that of a boy of 12, who suffered from trachoma of several years' duration. All the customary remedies and procedures had been employed, including carbon-dioxide snow and copper sulphate, besides rolling and grattage, without any permanent benefit. The vision was greatly impaired, owing to corneal opacities and pannus. Finally, the 0.5-percent dichloramine-T solution was tried, being instilled once every hour. After three-weeks' treatment, the boy was dismissed apparently cured, and six months later no recurrence had taken place.

Another patient was a girl of 5 years, who had been treated for several months for phlyctenular conjunctivitis. When first seen, she was suffering from acute reinfection. The eye was swollen shut and there was a purulent discharge. She

was immediately placed upon the dichloramine-T treatment, a few drops of the 0.5-percent solution being instilled every hour for twenty-six hours, then every two hours. After the fourth day, the child was dismissed from the hospital, no further treatment being required.

The third case was that of a Japanese child, aged 4 years, the left eye being so swollen that the cornea could not be seen. The following day, under dichloramine-T treatment, the swelling had receded so that the intact cornea could be seen, and at the end of forty-eight hours the eye was open. In one week the child was dismissed.

The fourth was a typical case of gonorrheal ophthalmia in a child of 3 years. The 0.5-percent dichloramine-T solution was instilled into the eye every two hours, and an ice compress was applied. After twelve hours, improvement being slight, one drop of a 1-percent silver-nitrate solution was instilled, this treatment being followed by the use of dichloramine-T solution every hour, day and night, until at the end of thirty-six hours the swelling had gone down so that the eye was open and there was only a slight discharge. On the third day, the conjunctiva was entirely void of bacteria. On the fifth day, the child was dismissed.

The results obtained in these cases undoubtedly lead us to hope that in dichloramine-T there has been discovered a germicide that will prove effective in thousands of cases of ocular infection in which most of the antiseptics are proving unsatisfactory. Should it prove curative in trachoma it will, indeed, be a godsend.

THE WASSERMAN REACTION: ITS USE AND ABUSE

In *The Lancet* for May 4, Hugh W. Bayly shows that the Wassermann reaction is not specific for lues for the reason that it is not in any sense an immunity-reaction: It is neither a test for toxin or one for antitoxin, but, the reaction is only

a remote consequence of syphilis-infection. It may be absent in undoubted florid syphilis and may be present in other diseases when, apparently, syphilis can be excluded.

Despite these facts, it can not be denied that the Wassermann reaction is of very great clinical value and that, properly evaluated and in conjunction with other symptoms, it may be utilized to determine the diagnosis either positively or negatively.

Bayly very aptly calls the Wassermann reaction a symptom. Now, a symptom does not become useless for diagnosis because it is not pathognomonic; and it is the sum of various symptoms, none of which may be pathognomonic, that establishes diagnosis. He considers the Wassermann reaction as one of the most valuable symptoms of syphilis infection that we possess, but, believes that a diagnosis can not be based with certainty upon this symptom alone, even if the reaction is strongly positive, and that weak positives are useless for diagnosis.

A negative Wassermann reaction is of especial value when lesions of a doubtful nature are present and render it highly improbable that syphilis is the cause of the lesions. A negative Wassermann reaction of the cerebrospinal fluid is probably sufficient evidence to exclude general paralysis. A negative reaction also indicates that the treatment given has been efficient; still, one or two negatives constitute no proof of permanency of cure.

EMETINE HYDROCHLORIDE IN ACUTE AFFECTIONS OF THE LUNG.

The Practitioner for May abstracts a thesis by Million, in which the author deals at length with the employment of emetine hydrochloride in acute inflammatory and congestive affections of the lungs, because of its depleting and antiphlogistic effects. Particular attention is devoted to the use of the drug in the treatment of bronchopneumonia accompanying or resulting from measles.

In every attack of bronchopneumonia, there are two factors, one of infection and the other of congestion. Emetine has no effect upon the infectious element, but it exerts considerable influence upon the active congestion due to inflammation. Digi-

taline, on the other hand, is useful for counteracting the passive congestion produced by circulatory disturbances, owing to a failing heart and dilatation of the right ventricle.

In addition to its effect upon congestion, emetine has a favorable action upon the temperature and upon the bronchial secretions. In this respect, it possesses a very great advantage over ipecacuanha because it does not cause vomiting and the depressing effects arising in consequence. It often brings about very quickly a considerable fall in the temperature, which, Million considers, may be looked upon as being of favorable prognosis in the development of the disease. In very many cases, this fall of temperature has been achieved within four or five days and sometimes in two or three. Defervescence then proceeds satisfactorily, although occasionally deferred until the sixth day.

The treatment with the emetine is carried out by giving daily hypodermic injections for four or five days. More are but very seldom required. After an interval of six or seven days, if a relapse occurs and the previous effects of the emetine have been satisfactory, four more injections are to be given. The daily dose should be, for children under one year, 1-4 to 1-2 cg.; at the age of from one to four years, 1 cg.; and at over four years 2 cg. The injections should be made into the outer side of the thigh. They cause neither pain nor any local reaction.

The advantages of the use of this drug in the bronchopneumonia of children may be summed up thus: (1) Antipyretic effect sometimes considerable; (2) expectorant action; making the secretion more fluid; (3) relieves the congestion—its most important effect; (4) is not a depressant; (5) easy to use, even in babies; (6) therapeutic doses not toxic.

SULPHUR IN PSORIASIS

In *The Lancet* for July 28, 1917, Louis Bory describes a new treatment for psoriasis, based upon the relationship between this condition and tuberculosis. His formula is:

Precipitated sulphur.....	Gm. 0.20 (grs. 3)
Eucalyptol	Gm. 20.00 (drs. 5)
Oil of sesame.....	Gm. 80.00 (ozs. 2 $\frac{2}{3}$)

The oil is warmed until the sulphur is completely dissolved, then the eucalyptol is

added. A dose of 5 mils of this solution ($=0.01$ of sulphur) is injected deeply into the gluteal muscles. In one case, a single injection caused large confluent patches, extending all over the body, but disappearing in several days.

PROPER CONDITIONS OF LABOR IMPERATIVE FOR WOMEN WAR-WORKERS

"In view of the urgent necessity for prompt increase in the volume of production of nearly every article required for the conduct of the war, vigilance is demanded of all those in any way associated with industry, lest the safeguards with which the people of this country have sought to protect labor should be unwisely and unnecessarily broken down."

This sentence sounds the keynote of the industrial policy of the two great divisions of the United States Army—today placing numberless contracts of fabulous size and value—the Ordnance Department and the Quartermaster's Department. In "General Orders No. 13," from which it is quoted, issued not long ago by the Ordnance Department and later adopted by the Quartermaster General, there are set forth in some detail the principles of this policy, and in no uncertain words the reason for its existence. "It is a fair assumption," it goes on to say, "that for the most part these safeguards are the mechanisms of efficiency. Industrial history proves that reasonable hours, fair working-conditions, and a proper wage scale are essential to high production." Enlightened patriotism, in other words, demands, not that the workers shall work long hours at top speed for the least possible wages, but, that for the sake of output they shall make a steady reasonable expenditure of strength for a reasonable length of time under proper conditions. We have long heard these things demanded for the good of the workers, but, now a new partnership has been formed. Efficiency and humanity go hand in hand.

From the time of our entrance into the war, the importance of conserving labor standards has been emphasized and re-emphasized by important officials in the Government. The president himself in welcoming at the White House the British Labor Commission which visited this country last spring, said that "nothing would be more deplorable" than "to set aside even

temporarily the laws which have safeguarded the standards of labor and of life," when we are fighting in a cause which "means the lifting of the standards of life." The Women's Committee of the Council of National Defense has taken, as its official standards for the employment of women, the standards issued by the Ordnance and Quartermaster's Department as part of General Orders No. 13. The Departments of Women in Industry of the Women's Committee throughout the country are doing and will do all in their power to put this endorsement into practical effect, with the cooperation of the Department of Women in Industry of the Women's Committee at Washington.

What are these standards and why are standards for working women of such prime importance to the nation at this time? Proper conditions of women's labor have always been of peculiar importance to the state. In peace times, the United States supreme court held that, for the sake of future generations, it was constitutional to limit the working-hours of women to eight hours a day. Today in war time, limitation of hours is important for an additional reason. Modern warfare is not fought in the trenches alone. The army at the front is helpless if the second line of defense, the army in the factories, is not able to keep up production of supplies. In emphasizing the necessity of rigid enforcement of existing legal standards and urging that, "even where the law permits a nine or ten-hour day, effort should be made to restrict the work of women to eight hours," the Ordnance Department has in mind primarily the output of munitions.

In urging the prohibition of night work, they state that "English investigators have found that night work for women involves proportionately larger costs for supervision and protection." The human cost of night work has long been known to social investigators. A world war has brought out its pecuniary extravagance.

The Saturday half-holiday—"an absolute essential for women, under all conditions"—adequate meal, and rest-periods, and one day's rest in seven also find place in this government list of industrial standards. Even with the best will in the world and despite the most ardent spirit of sacrifice, human beings can not do continuous work without losing their efficiency. The Eng-

lish workers, who toiled such long hours at the beginning of the war, did so willingly for the sake of their soldiers. But, as the war went on, the sickness-returns showed an alarming increase. The general health of the people was going down. It may be said without hesitation, having regard to the experience of the British, that it is uneconomical, it is unwise, and it is bad management to work men or women abnormally long hours, because it does not pay in the end.

Proper regulation of hours alone, however, will not solve the problem. The Ordnance Department knows that it will not help production to limit hours if the men and women who work these hours are not secured in the fundamental necessities of life—if they are hungry, poorly clothed, improperly housed.

Therefore, it is urged that standards of wages "already established in the industry and in the locality should not be lowered," "that minimum wage rates bear a constant relation to increases in the cost of living," and that, in the case of replacement of men by women, there should be equal pay for equal work. In justice to our soldiers at the front, the standards of the jobs they have left behind must not be lowered by these new recruits, who will, in increasing numbers, take their places in the industrial army.

TOBACCO, FLEAS AND PLAGUE

In an interesting paper under the above title, printed in the February number of *The Indian Medical Gazette* (cf. *The Lancet*, May 4), Mr. S. Mallanah, of Hyderabad, India, reports that tobacco kills fleas practically instantaneously, and his suggestion is that tobacco-leaves can be used as a preventive measure, which eventually would stamp out the plague. He finds that, when tobacco-leaves are spread over the floors of houses where people sleep, the fleas, as they enter the rooms, perish, with the result that there is no subsequent infection.

In his investigations, some 52 houses in highly infected areas were "tobaccoed" according to his method. The leaves were stitched on to a piece of matting and laid on the floor. The same number of houses of the same type and in close proximity were left untouched as controls. Despite the fact that the floor was strewn with tobacco, plague here and there did break

out—a fact which the writer attributes to a faulty method, while the number of houses tobaccoed that enjoyed complete immunity was certainly remarkable. Out of 52 houses that were thus tobaccoed, only one became infected (and that, it is stated, not despite the use of the tobacco), and, out of 52 control-houses, seven became infected; which shows that the tobacco apparently failed in 14.2 percent of cases and succeeded in preventing plague in 85.8 percent of the cases under experiment.

In conclusion, the writer expresses his firm belief that, if the government were to spend a fraction—he suggests one-eighth—of what it has actually spent in carrying out his method, it would "save the misery and devastation of thousands of homes caused by the appalling death rate from this calamity."

Tobacco, of course, is a well-known insecticide, still, we are not aware that it heretofore has been reported as being so prompt and effective a pulicide. The method might, with advantage, easily be tried in cases where *pulex irritans* is not known to be a disease-carrier, but, all the same is a pest.

THEY ARE SELLING BONES FOR FOOD IN ENGLAND

Over in England, they are selling bones at the rate of five pounds for one shilling. Policemen regulate long lines of people patiently standing out on the sidewalks,



Bones—Four Lbs. for 1 Shilling.

waiting, not for their favorite matinee idol to pass, but, for a chance to enter a food-shop to buy a small quantity of food. It takes about three minutes for the shopkeepers to dress their windows over there,

merely because there are, perhaps, but a few cans of condensed milk and a box or two of corned beef to be displayed.

Yet, over here in America, bones, nay, even fats and precious scraps of meat are

tribute to the support of the hundreds of thousands of United States troops now on the other side. The food shortage is real. Save food and "Carry On".

GASOLIN-DERMATITIS

During nearly two years with the Royal Naval Air Service in Flanders, Surgeon G. B. Page, of the Royal Navy reports (*Pract.*, May) that he has seen a number of cases of gasolin-dermatitis.

This condition results from the more or less prolonged contact of gasolin-soaked



Line Waiting for a Chance to Buy Food.

going into the garbage-pails! Although in many cities there were long lines of people waiting this winter for supplies of coal, there has as yet been no pinched-faced mob pleading for food. True, there frequently are long lines of people on the street, but, mostly they are buying tickets to shows!



Window Displays Are a Simple Matter.

In the busy streets in towns and cities, shopkeepers display elaborate arrangements of all kinds of delicacies in their showcase-windows. They would scorn a "display" of corned beef and condensed milk!

The accompanying pictures are from the Official Press Bureau in London. They were sent over to this country for the express purpose of showing America what England really is facing. A country in such straits not only needs help herself, but, can not possibly be expected to con-



The Empty Meat Stall.

tributing to the support of the hundreds of thousands of United States troops now on the other side. The food shortage is real. Save food and "Carry On".

clothing with the skin and is a fairly frequent concomitant of aeroplane crashes. The occupants may be pinned by wreckage beneath a burst tank, and, after being extricated, they may be too dazed or hurt to remove their flying-gear so as to allow the gasolin to escape. Inexperienced pilots, though otherwise unhurt, may delay changing their clothes until the burning pain warns them that something is wrong. Less frequently the condition is brought about during an ordinary flight, because of leaking tanks or connections; also, the author has seen two cases which were not related to aviation.

The lesion produced resembles exactly a burn or scald of the first and second de-

gree; that is to say, there is erythema and some vesication, and considerable burning pain. The area involved often is large, that is, both legs, thighs and feet.

As regards treatment, it is worth while noting that grease of any sort increases the discomfort. Lead lotion applied on lint or zinc-carbolic lotion (zinc oxide, drs. 3, suspended by glycerine, oz. 1, in 1 percent carbolic acid solution to oz. 8) sponged on are the best applications at first. These may be followed by a simple dusting powder when the symptoms subside, a process which is fortunately rapid. The affected limbs should be left uncovered in warm weather, or else a cradle used to support the bed-clothes.

The author emphasizes the importance, in case of aeroplane accident, of noting whether the patient's clothing is saturated with gasolin and, if it is, to remove it as soon as circumstances permit. Incidentally, it may not be amiss to point out that naked lights and smoking in the vicinity of an aeroplane crash (and this is true of automobile crashes likewise) are forbidden for the reason that usually the debris and the surrounding ground are covered with gasolin.

COLLOSOL MANGANESE IN FURUNCULOSIS

The routine treatment of boils and other deep-seated coccogenic affections, such as ecthymatous impetigo and some cases of acne often is most disappointing. For furunculosis, some authorities lay stress upon constitutional treatment; and in certain cases, as where the process is associated with diabetes, this obviously is important. Others rely, rather, upon the local application of antiseptic agents, with a view to absorbing the boils. But both forms of treatment frequently fail. In many instances, boils appear in succession, and, when at last the dismal procession ends, this often appears to be less the result of treatment than because the disease has run its natural course. This is true of vaccine-therapy, as well as of the earlier methods. Sometimes the inoculations appear to arrest the disease; in other cases, they signify fail to do so.

Under these circumstances, Sir Malcolm Morris (*Brit. Med. Jour.*, Apr. 20) decided to investigate the treatment with collosol manganese, concerning which Mr. J. E. R.

McDonagh, at the General Hospital at Etaples, reported some time ago. Collosol manganese was administered intramuscularly to patients with long-standing and obstinate skin diseases, and with the most pleasing results. Incidentally, there was observed a great improvement in the general health of the patients, being manifest within a few days of the first injection.

Collosol preparations are colloidal preparations made by the Crookes Laboratories, London, England, where most of the work on the subject of colloids, in England, has been done. On the use of these substances, clinical reports have been published especially by Sir Malcolm Morris, for instance, in *The British Medical Journal* for May 5 and 12, 1917. The literature on colloids has assumed somewhat terrifying proportions and is not quite easy to understand without special training in the subject. However, the theory of colloidal solutions, which dates back to 1861, when Thomas Graham published his first papers, was discussed at some detail in the same publication, in the issue of February 3, 1912, on page 252. The Abstractor will prepare a special article on the subject of colloids, in the near future.

ALOES FOR INSECT-BITES

Professor Pognat, of Geneva, has revived (*Practitioner*, May) the formerly extensive local use of aloes. On the strength of several personal experiments, Pognat concludes that the application of a saturated alcoholic solution of aloes is of material benefit in the case of bites by mosquitoes and other insects. The place is rubbed well with a pledget of wool soaked in the tincture, or even with the moist end of the cork, when no local or general reaction will be produced—neither swelling, redness nor pain. However, this good effect is obtained only if the application is made soon after the bite is felt. Pognat himself is particularly sensitive to wasp-stings. On one occasion, he was stung in three places on one hand, but, the application of tincture of aloes quite prevented the usual effects from appearing. Equally good effects follow its use in stings from bees and other poisonous hymenoptera. He has not found out as yet what the neutralizing substance is in aloes, but, he is extending his observation to the bites of venomous snakes.

Miscellaneous Articles

Studies on Food Economics

XIV. Cookery of Vegetables

MY reader will recall Haller's statement previously referred to, "*Dimidium corporis humani gelatinum est*," meaning that half of man's substance is gelatin or that which by cookery and digestion becomes gelatin. In the vegetable structure, we encounter a close analogy to this. Here, the cellular structure is more clearly defined than in the animal, as may readily be seen with the aid of the microscope of moderate power.

Pluck one of the fibrils that you see shooting down into the water in hyacinth-glasses, or, failing such, take any other succulent rootlet. Crush it between two pieces of glass and examine it. At the end, there is a loose spongy mass of rounded cells; these merge into oblong rectangular cells surrounding a central axis of spiral tube or tubes or greatly elongated cell structures.

Take a thin slice of stem or leaf or flower or bark or pith, examine in like manner, and cellular structure of some kind will display itself; clearly demonstrating that, whatever may be the contents of these round, oval, hexagonal, oblong or otherwise regular or irregular cells, we can not cook and eat any whole vegetable or slice of vegetable without encountering a large quantity of cell-wall. This cell-wall structure constitutes far more than half the substances of most vegetables, and, therefore, demands prominent consideration.

This substance exists in many forms and with widely differing physical properties, but, with very little variation in chemical composition—so little that in many chemical treatises cellular tissue, cellulose, lignin, and woody fiber are treated as chemically synonymous. Thus, Miller says:

"Cellular tissue forms the groundwork of every plant and, when obtained in a pure state, its composition is the same,

whatever may have been the nature of the plants that furnished it, though it may vary greatly in appearance and physical characteristics; thus, it is loose and spongy in the succulent shoots of germinating seeds, and in the roots of plants such as the turnips and the potato; it is porous and elastic in the pith of the rush and elder; it is flexible and tenacious in the fibers of hemp and flax; it is compact in the branches and wood of growing trees; it becomes hard and dense in the shells of the filbert, the peach, the cocoanut, and the phytelephas (or, vegetable ivory)."

Chemically, in all these instances, it is known as carbohydrate, being composed of carbon and the elements of water (which, by the way, must not be confounded with the hydrocarbons, the compounds of carbon and hydrogen, with no oxygen, such as petroleum, fats, essential oils, and resins).

However, there is some little chemical difference between wood tissue and the pure cellulose that we have in cleansed cotton and linen and in the pure paper pulp used in making the filtering paper for chemical laboratories and which burns without leaving a weighable residue of ash.

The woody forms of cellular tissue owe their characteristic properties to an incrustation of lignin which often is described as synonymous with cellulose, although this is not so. It is composed of carbon, oxygen, and hydrogen, the same as cellulose, but, the hydrogen is in excess of the proportion required to form water by combination with the oxygen. My own view of cellular structure (*lignum*) is, that it is a combination of a carbohydrate with a hydrocarbon.

Certain animals (the beaver, for instance) possess the power of digesting ligneous material. The whole of the beaver's

stomach, and more especially that portion of the alimentary canal called the cecum, often is found crammed with fragments of wood and bark.

There is a story about Marie Antoinette who, at the beginning of the French revolution, on being informed of a famine in the neighborhood of the Tyrol and of the death by starvation of some of the peasants there, remarked, "I would rather eat croutons than starve!" "Croutons," translated in English as pie-crust, was understood by the French nobles to mean pastry, and, so, they surrounded her and giggled at the ridiculous conceit. However, they, in their ignorance, were not aware of what the queen alluded to. What she meant by croutons was the covering made of flour and water, and sawdust, with which these peasants cooked their meat, by enclosing it in this rolled dough, either by baking, or on embers. This baked dough, called croutons, is fed to the pigs, who seem to digest it thoroughly. sawdust included. Hence, the Queen meant, "she would rather eat 'pig-food' than starve!"

When on the subject of cooking animal food, I had to define the cooking-temperature as determined by that at which albumen coagulates, and to point out the mischief arising from exceeding that temperature and thus rendering the albumen horny and indigestible.

No such precautions are demanded in the boiling of vegetables. The work to be done in cooking a cabbage or a turnip, for example, is, to soften the cellular tissue by the action of hot water; there is nothing to avoid in the direction of overheating. Even if the water could be raised above 212 degrees, the vegetables would be improved, rather than injured thereby.

The question that now naturally arises is whether modern science can show us that anything more can be done in the preparation of vegetable tissue than the mere softening in boiling water.

The same occurs in ordinary commercial starch at 320 degrees, the difference evidently depending upon the water retained by it.

If the heat is continued a little beyond this point, the starch is converted into dextrin, otherwise named British gum, gommeline, starch gum and Alsace gum because of its resemblance to gum arabic—for

which latter it is now very extensively substituted. Solutions of this in bottles are sold in the stationers' shops under various names for desk-uses.

The remarkable feature of this conversion of starch into dextrin is, that it is accompanied by no change of chemical composition. Starch is composed of 6 equivalents of carbon, 10 of hydrogen, and 5 of oxygen— $C_6H_{10}O_5$, or, 6 of carbon and 5 of water or its elements.

Dextrin has exactly the same composition; so, also, has gum arabic, when purified. But, their properties differ considerably.

Starch, as everybody knows, when dried, is white and opaque and pulverent; dextrin, similarly dried, is transparent and brittle; gum arabic, the same.

If a bit of starch or a solution of starch is touched by a solution of iodine, it becomes blue, or almost to blackness if the solution is strong; no such change occurs when iodine solution is added to dextrin or gum.

A solution of dextrin containing potassa changes to a rich blue color when a little sulphate of copper is added; no such effect is produced by gum arabic. Thus we have an easy test for distinguishing between true and fictitious gum arabic.

The technical term for describing this persistence of composition with changes of properties is, isomerism, and bodies thus related are said to be isomeric with each other.

Another distinguishing characteristic of dextrin is, that it produces a righthanded rotation of a ray of polarized light. Hence, its name—from dexter, the right.

The conversion of starch into dextrin is a very important element of the subject of vegetable cooking, inasmuch as starch food can not be assimilated until this conversion has taken place, either before or after we eat it. I, therefore, will describe other methods by which this change may be effected.

If starch be boiled in a dilute solution of almost any acid, it is converted into dextrin. A solution containing less than 1 percent of sulphuric or nitric acid is sufficiently strong for this purpose. One method of commercial manufacture (Payen's) is, to moisten 10 parts of starch with 3 of water containing 1-150 of its weight of nitric acid, spreading the paste

upon shelves, allowing it to dry in the air, and then heating it for an hour and a half at about 240 degrees F.

However, the most remarkable and interesting agent in effecting this conversion is diastase. It is one of those mysterious compounds that have received the general name of ferments. They are disturbers of chemical peace, molecular agitators that initiate chemical revolutions and which may be beneficent or very mischievous. The morbid matter of contagious diseases, the venom of snake-bite, and a multitude of other poisons are ferments. Yeast is a familiar example of a ferment, and one that is best understood.

I must not be tempted into a dissertation on this subject, yet, it may be stated that modern research indicates that many of these ferments are microscopic creatures that link the vegetable with the animal world; and they may be described as living things, seeing that they grow from germs and generate other germs that produce their like.

Where this is proven, we can understand how a minute germ may, by falling upon suitable nourishment, increase and multiply, and thus effect upon large quantities of matter the chemical revolution above named.

I already have described the action of rennet upon milk, and seen what very small quantity produces coagulation.

There appears to be no intercession of living microbes in this case, nor have any been as yet demonstrated to constitute the ferment of diastase, although they may be suspected. Be this as it may, diastase is a most beneficent ferment. It communicates to the infant plant its first breath of active life and operates in the very first stage of animal digestion. In a grain of wheat, for example, the embryo is surrounded with its first food. While the seed remains dry above ground there is no assimilation of the insoluble starch or gluten, no growth, nor other sign of life. But, when the seed is moistened and warmed, the starch is changed to dextrin by the action of diastase, and the dextrin is further converted into sugar. The food of the germ thus gradually rendered soluble penetrates its tissues; the germ is thereby fed and grows, unfolds its first leaf upward, throws downward its first rootlet, still feeding on the converted starch, until it has developed the organs by which it can

feed on the carbonic acid of the air and the soluble minerals of the soil. But for the original insolubility of the starch, it would be washed away into the soil and wasted ere the germ could absorb it.

The maltster, by artificial heat and moisture, hastens this formation of dextrin and sugar; then, by a roasting heat, kills the baby plant just as it is breaking through the seed-sheath.

Diastase may be obtained by simply grinding freshly germinated barley or malt, moistening it with half its weight of warm water, allowing it to stand, and then pressing out the liquid.

One part of diastase is sufficient to convert 2,000 parts of starch into dextrin, and from dextrin to sugar if the action is continued. The most favorable temperature for this is 140 degrees F. The action ceases if the temperature be raised to the boiling-point.

[To be continued.]

A. T. CUZNER.

Gilmore, Fla.

NATIONAL WAR SAVINGS DAY MUST BE MADE BIG SUCCESS

The National War Savings Committee, which is carrying on, through its state and local committees, a Nation-wide campaign to get all the people on or before June 28 to pledge themselves to save to the utmost of their ability and to buy War Savings Stamps with their savings, has given out the following statement:

"Those of us who remain at home while others do the fighting have an ever-increasing number of opportunities to do definite and highly important work for our country. We wish to do this work as an expression of the gratitude we feel in being privileged to continue at our usual tasks, to enjoy the loving companionship of our families, to meet freely with our friends and neighbors, to enjoy all the security of life and most of the pleasures and the economic privileges of peace times while other men, who have had to put aside all these things, are fighting our battles for us on the sacred soil of France and on the high seas.

"Our new opportunity to serve comes as a result of designating June 28 as National War Savings Day, a day on which all men and women of sufficient years to appreciate the day's significance are called upon to pledge themselves to save to the ut-

most of their ability and to conserve all possible labor and materials for the Government, and to buy War Savings Stamps with their savings. Our part is to do everything possible to make this day stand out among the great days of the war.

"Could any one of us be asked to do less than this? Could any one of us refuse to do so little a thing to win a war for the world's freedom? Could any one of us put aside this plea for saving while all Europe is crying out in its agony to be released from the clutches of the monster that is befouling all it touches? Could we refuse so simple a thing and at the same time ask other men to give their lives that our own precious lives be spared and our firesides be kept safe from the Hun?

"Our duty is clear, our privilege is great, our sacrifice is little, our work is important.

"National War Savings Day is to be the great rallying day on which everyone in the country is expected to pledge himself or herself to save and economize. This saving and economizing will first of all leave in the markets a greater supply of labor and materials for the use of the Government with which to fight the war. And then the money savings of the individuals are to be invested in War Savings Stamps.

"What the Government asks us to do is to pledge ourselves to buy at definite periods with our savings a specific amount of War Savings Stamps. The thing to be accomplished is to get subscriptions which will take care during the balance of the present year of the unsold portion of the \$2,000,000,000 of War Savings Stamps authorized by the Congress.

"When one stops to think of the matter, it is really a small thing to raise \$2,000,000,000 in a country of more than 100,000,000 people. If everybody would do his share, it would be necessary for each person to subscribe to only \$20 worth of stamps.

"The duty of us at home is to see to it that the entire amount is subscribed. We must work to that end. We must add to our already great army of war savers. We must make more sacrifices ourselves and urge sacrifices upon others. National War Savings Day *must be* made the great success all of us hope for."

[Although War Savings Day will have passed into history by the time this issue

reaches our readers, the message contained in this article still must be heeded. Let everybody who can possibly do so invest a stated amount from time to time in these Government securities, and thus help to win the war.—Ed.]

CHRONIC GASEOUS INTESTINAL CONSTIPATION

Blessed are those who live, eat, sleep, and work near a toilet-closet. Yea, doubly blessed are those whose bowels make it necessary to make the use of it necessary at least three times every twenty-four hours. Very efficient bowels in eliminating waste material from the alimentary canal normally are not always very accommodating to the happy possessor.

The filling up of the bowels with noxious gases is a sin against the spirit of man, an atrocious neglect of the body, and a nuisance when the gases are expelled in a toilet-closet and an abomination of stench to the region thereabout. Unfortunately, but a few are able to expel it at all, so that the bowels become distended to the limit of the tube with toxic foul gases, thereby inhibiting all the functions of the body and the mind; and this is the basis for much immoral conduct, neurasthenia, and insanity in young and in old. The toxic substances enter into all the tissues of the body, resulting in selfpoisoning and so depressing the functioning of all the organs of the body.

The great volume of the gases in the large intestine mechanically distends the cecum, the ascending, transverse, and descending colon, thus preventing intestinal peristalsis, and resulting in fecal stasis, constipation, diarrhea, and prolapsed, pouched, kinked, flexed sections of the large intestine in its effort to accommodate the great volume of surging gases and the foul imprisoned contents of the large intestine.

No wonder feces are so often found in the ascending colon and other portions of the intestine and that stasis and constipation of the bowels exist so universally in man, when gallons of toxic gases are confined in the large intestine by the ileocecal valve and the sphincter of O'Beirne or the third sphincter muscle at the upper end of rectum. The large intestine is some five feet in length and 2 to 2 1-2 inches in diameter; therefore capable of holding several gallons of foul gases, which crowd out

the abdominal walls for several inches, push up the diaphragm, press down the kidneys and the pelvic organs, besides exciting the generative organs and producing lustful dreams, thoughts and conduct. Pain is experienced in the region of the heart, appendix, ovaries, uterus, bladder, sigmoid flexure, in fact, more or less all over the abdomen and the sides and back are often involved in this painful area; also, nervousness, vertigo, unrestful sleep, irregular circulation of the blood, with colicky pains in the region of the greatest gaseous disturbance—which is usually in the cecum and sigmoid flexure. The ends of the gas-filled tube naturally are disturbed most.

The rectum is narrower at its junction with the sigmoid flexure—(sphincter of O'Beirne), and in all cases of chronic proctocolitis there is more or less occlusion in this region, some 5 inches above the anal vent. The shutting up of the bowels causes undue retention of feces, which become very putrid, forming or generating great volumes of gases, which, in turn, cannot be expelled. Three sources of self-poisoning are constantly kept in operation by the absorption of the inflammatory exudates and toxic feces and gases, and great nervous disturbance takes place from the constant mechanical pressure on the tissues and organs.

Gaseous constipation is a very serious matter, as it invades the whole length of the gastrointestinal canal, disturbing, displacing organs and constantly irritating the involuntary and voluntary nervous systems, so that rest is unknown to the weary mortal. Its vicious circle of poison and irritation eclipses all that may be said about fecal stasis, which never balloons the bowels or presses organs out of place as does gas in its effort to get somewhere and thus lessen muscular tension, so wearisome and exhausting to body and mind.

The human body is only a blotting paper for the gastrointestinal canal, absorbing the normal as well as the abnormal substances. Premature age, intestinal autointoxication, autotoxemia, and neurasthenia indicate that the "gastrointestinal blotter" has become quite foul, full, and useless (like an ancient paper ink-blotter on a desk, ready for the waste-basket) unless it can be sterilized and thus prepared for future usefulness. Humans have no foresight or efficiency for bodily hygiene, therefore, men soon become

filled with deleterious substances, and thus subject to many ills.

Gasity, or flatulence and fecal foulness of the large intestine, is an insidious, progressive secondary symptom of many years' duration, the cause of which may usually be traced to infancy, as a result of wearing a toxic diaper, this setting up inflammation in the anorectal canal, which in time results in proctocolitis, with more or less stricture of the bowels, involving the sphincter of O'Beirne at the rectosigmoid juncture—as well as the bowel above and below the sphincter and flexed region of the gut. This is a most important diagnostic region in all questions of abnormal bowel elimination, as normal elimination should take place three times in twenty-four hours.

The infant wearing a toxic diaper, with the setting up of proctocolitis, makes this a universal ailment, and the great majority of chronic sufferers from fecal and gaseous constipation never knew what it was to have a normal impulse to stool. Therefore, they should not be accused of neglecting an impulse to defecate.

The gastrointestinal apparatus is to the body of a man as a pot filled with soil is to a plant growing in it, and in both instances the nutritive conditions must be normal or the body of man or that of the plant will slowly fade and wither away. Pots for growing plants have a hole in the bottom, and porous walls. In man, the hole in the alveus pot is closed by disease and the skin is like a piece of rubber through which no moisture can escape.

It never occurred to the medicos that, when three, six or more gallons of gases were confined in the large intestine, the ileocecal valve and the sphincter of O'Beirne or the third sphincter-muscle must be pretty thoroughly closed. Long before Job uttered his lamentations and up to the present time, mankind has been slowly gassed to death, on account of a diseased third sphincter-muscle. His breath is filled with foul toxic gases and passed over a tongue that tells, by its thick coating, a mute direful story of the chronic foulness of all the tissues of the body. It is appalling that so much foul-smelling sewer-gas from the large intestine must escape by way of the mouth and nose and through other tissues of the body, in order that the pressure of the gases might be lessened.

Instead of prescribing numerous drugs that do no good and a diet that is useless,

or advising one surgical operation after another, that make a bad matter worse, why not direct attention to the closed third sphincter-muscle and relieve the unhappy possessor of six or nine gallons of gases imprisoned in the large intestine—and finally restore the lower bowels to their normal function?

In chronic, gaseous, zigzagged, ballooned bowels, we expect the large intestine to be pushed into all sorts of distorted conditions, in the way of pouches, loops, kinks, dislocations, bands, etcetera. Everything is askew from being gassed for many years.

And what can be expected from several half-pound metallic meals, as a means of x-ray diagnosis, when the weight of the metal intensifies the symptoms caused by chronic gasity of the bowels.

Relieve the bowels of abnormal gases and trust to nature that, in due time, the various organs will resume their normal location.

As an illustration, I will mention a case of a woman forty-eight years of age, who brought with her to my office the following typewritten diagnosis from an eminent professor and author of a book on digestive troubles. Dr. C. S. Evans, of Hutchison, Kansas, a clinical student of mine, was present at the time of her visit. Her case was extremely interesting, from the fact that she had had the means to employ the supposed best medical and surgical talent in the country for over twenty years, and, were it not for her mother, she would have ended her life long ago. Here is a copy of the aforesaid expert diagnosis:

"I am sorry to hear of all the trouble you are having; certainly, it is more than one person's share. Naturally, I would do whatever I could do for you.

"Regarding the diagnosis: You have a gastropnoia—greater curvature of the stomach is below the ileal crests. There is a six-hour retention in the stomach of about 25 percent; the cecum is prolapsed, there are adhesions in the mid-cecum zone.

"In addition to this, there is *chronic excessive intestinal putrefaction of the mixed type. Some degree of chronic colitis exists.*

"The foregoing is taken from my records, and for you to show to whatever physician you select.

"I do not know how you are now, but, I do remember that at the time you had

gotten through with me the conditions in the abdomen were immensely improved. I hope you are not as bad as you were, and I doubt that you are.

"I think it would be a good plan to take a posture- and rest-cure, which any physician could carry out who has one of my textbooks. The bacterial treatments would have to be carried out under my supervision and it would be necessary for you to be in New York to get them. You can, however, become much better without them, and to that extent a good conscientious physician can direct you."

As usual, the diagnosis was wrong as to the cause of the lifelong trouble, and, naturally, numerous makeshift treatments were prescribed, as life's vitality and finances waned away. Wan, weary, and wholly discouraged after so many promises of cure and as many failures, what more could sick body and mind think of but to end it all?

But, hope ever dwells in the human mind by the suggestion of the spirit in the frail organism, so, the brave woman, who lived in spite of medico's treatment, will be restored to health in body and mind.

She should have been treated for proctocolitis thirty or forty years ago, thus preventing the third sphincter-muscle becoming closed to the extent of not allowing the gases to escape—for the past twenty years. It would have been better for her to have consulted a plumber, who knows something about the value of waste-pipes and their cleanliness.

The following is a report given me by a chronic sufferer who came under my care January 4, 1916. She had suffered for some thirty years, undergoing several surgical operations and all sorts of medication and diet for *gaseous constipation*, which was so severe that rest or sleep was well-nigh impossible, day or night, and life a burden beyond endurance, were it not for hope that ever stays the suicidal hand.

She obtained speedy relief, and cure progressed without interruption. It afforded me much pleasure to have Dr. C. S. Evans meet the once chronic sufferer now restored to health.

Following is a report of a Roentgen examination of Mrs. W. P.:

"The plates of the stomach show an organ of the atonic form. It is ptosed, lying on the left side of the spine, the greater

curvature reaching as low as the true pelvis. The pylorus is at the level of the space between the fourth and fifth lumbar vertebrae when the stomach is distended. The use of the word "atonic" above refers to the type of stomach, as this organ shows good peristalsis for its size and form. The pylorus and cap, or first portion of duodenum, show no irregularities. The stomach was nearly empty at the fourth hour, there being only a trace of bismuth remaining in the cap, and at the sixth hour the stomach was entirely empty.

"The small intestine was empty before the tenth hour. The small intestine suffers from a marked ptosis, the cecum lying over the brim of the pelvis, both flexures lying at a lower level than normal. The level of these flexures can be noted best when not distended as in the six-hour view, when the upper levels are seen not distended by bismuth, but, by gas. Of course, after the enema, the flexures are carried up by the distension of the entire large bowel. The transverse colon makes a sharp angulation at both flexures, descending into the true pelvis, which it crosses. There was no evidence either in the plates or roentgenoscopically of adhesions or constricting bands. There is a residue throughout the colon at the thirtieth hour, but, not of any undue amount.

"Summary: The patient is suffering from a general ptosis, as described above, which surprisingly produces very little if any, delay in the emptying time of the various portions of the alimentary tract. The stomach was empty at six hours, which is unusual in this type, the normal emptying time being approximately from seven to eight hours; there was no ileal stasis, the only stasis being in the large intestine at thirty hours. It is very possible that at other times, during undue stress or following a period of overeating, the transverse colon becomes blocked and retains its contents for a much longer period owing to its poor anatomical position. It is impossible, however, for me to discuss such a condition, which did not exist during my examination."

For about forty years, I have been doing missionary work to have the doctors take a hint from the plumber-trade, to prevent the filling up of the bowels with feces and gases—the bane of human existence. Treatment: The necessary local treatment to

the chronic proctocolitis. Flush the bowels with water at a temperature of about 100 degrees twice or three times a day. Use hot water at a temperature of from 124 to 140 degrees, for an hour or more, once or twice a day. Drink 2 or 3 quarts of water during the day. In due time, hygienic conditions of the gastrointestinal apparatus will be established.

ALCINOUS B. JAMISON.

New York, N. Y.

[Compare the article, by the same author, in this journal for 1917, page 754.—Ed.]

SODIUM SALICYLATE AGAINST FURUNCULOSIS

When the devil advised the Almighty to visit Job with a crop of boils, he thoughtfully selected the most painful affection the flesh is heir to. If I wished to give the Kaiser a bodily ailment for his sins, I'd say, cover him with boils.

The diagnosis of boils is not of much importance, as it usually is a self-diagnosed disease. A patient in my office this morning made a clear diagnosis by his attitude in sitting on a chair. No mistake on that point. I cheerfully asked him whether he had a boil, and he retorted quickly: "Looks like a darn blind man could tell when a man had a boil. I've got one sure and I want it cured right now. And, say, doc, give me something to keep 'em from coming."

Now, there is where the fun comes in, brother. What are you going to give these poor devils to "keep 'em from coming"? I will confess that I, myself, have been a constant sufferer of furunculosis up till two years ago. Like Atlas bearing up the world, my neck was the spot of election. I had used everything in and out of the Pharmacopeia for that matter, that was recommended for boils, including all the vaccines and bacterins. But, to no effect. I thought I got some relief from 10-drop doses of conc. sulphuric acid, three times a day, but, I was mistaken. [See comment below!] The boils came right back in spite of the treatment.

A friend of mine, an old physician now dead, had been a sufferer of the same disease nearly all his life. He told me of an old man who was confident that the tablets that were being used for rheumatism, would cure him of these boils. Assuming that the "prophet" had in mind the salicylate of

sodium, he gave that a trial, when his boils were soon gone, never to return. After ten years of trial, he assured me, it came as near being a specific as anything he had tried.

For two years now, I have been prescribing sodium salicylate, in 5-grain doses every two hours, in the treatment of furunculosis, with satisfaction to myself and patients. Incidentally, I have gained somewhat of a local reputation as a "boil-doctor".

In cases where a boil or carbuncle is reaching good-sized proportions, the salicylate will come as near to aborting it as anything I have ever found. In fact, I have seen them dry up when it looked as though they certainly would have to be incised.

Just how this valuable agent works, I am absolutely unable to say. I have thought it might be that the absorption of the salicylate might be a bactericide in the blood and inhibit the action and growth of the staphylococci or possibly by overcoming the acidotic condition and in that way increase the natural resistance. No doubt, some of the brethren who are more familiar with the end-products of drugs could give us a clearer conception of the drug's action. The idea that I wish to convey is, that sodium salicylate will cure boils as nothing else will.

If some readers of *CLINICAL MEDICINE* will offer suggestions as to the improvement of the sodium-salicylate treatment or any additional treatment, I shall feel mighty glad, while, if by these few lines I may become the means of relieving some poor mortal of boils, I shall feel doubly paid for this modest effort.

A. M. McCUISTON.

Richlands, N. C.

[Many physicians have, like ourselves, found calcium sulphide to be an effective aid in the treatment of furunculosis and of other systemic affections that have a tendency to manifest themselves in the formation of "boils". There are, however, cases in which this remedy fails. It goes without saying that its administration must be supplemented by a thorough study of the body-chemistry and by the correction of any existing irregularities. Except in case of carbuncles, surgical treatment has not been found very satisfactory, it being of greater importance to pay close attention to the improvement of the systemic affections. In *The Journal of the American Medical As-*

sociation for October 13, Dr. P. D. Hawk and several others reported on results obtained from the use of bakers' yeast in furunculosis, acne, and various other skin affections, saying that the continued administration of this simple remedy had yielded very satisfactory results.

While we can readily account for the success attending the administration of sodium salicylate in certain cases of this kind, we are under the impression that this success will be limited by certain peculiarities of the individual case, and we believe that the free employment of yeast, also of the bacillus bulgaricus, such as it is presented, for instance, in the form of galactenzyme, will be equally effective in many cases. Nevertheless, Doctor McCuiston's suggestion is well worth being tried out, and we should like to receive other reports on the experience of other physicians who may employ this treatment.

With reference to the use of conc. sulphuric acid; by "conc.", the Doctor presumably means "concentrated", or, more properly, "full-strength". Of course, this must be *very largely diluted* and taken through a tube, the mouth quickly to be rinsed, and best with water containing a little sodium bicarbonate. It should be taken some twenty or thirty minutes after the meal.—Ed.]

WHAT WOULD YOU DO TO STOP SUCH THINGS?

President Wilson, while reviewing the Red Cross parade in New York, was greeted by a Canadian soldier, invalided home from the front, who had been taken into the Canadian army in spite of the fact that he was 54 years old, when the authorities learned that his son was one of those that German soldiers crucified on a barn door. What would you do to stop such fiendish things? Do you think it much of a sacrifice to pledge yourself to save and to buy War Savings Stamps?

THE BEST INVESTMENT IN THE WORLD

From whatever angle it may be considered, an investment by an American citizen in Liberty Bonds or War Savings Stamps is the best investment in the world.

The money so invested goes to the Government, which loans some of it to our al-

lies; all of it is used in one way or another to maintain, support, arm, equip, and make victorious our armies and our allies in Europe. Surely no American money could be put to a better purpose. Here is an investment in the power and success of our country, an investment in the efficiency, strength, safety, and success of our fighting men on sea and land.

We do not know what commercial and industrial conditions are to be when the war closes, but we do know that a Liberty Bond and other United States Government securities will be sound and secure. Every dollar loaned the Government by our people now is a dollar saved for the time when peace comes. With their savings invested in these sound securities, the American people will be well prepared to meet the problems that peace will bring. It is a species of insurance for that day, and at the same time good business.

GERMANY'S WAR ON THE WOUNDED

German airplanes recently bombed a large American hospital. Hovering at low altitudes, every effort was made to hit the main building, which was conspicuously marked with the Red Cross emblem. Doctors and nurses removed our boys to trenches previously dug for such emergencies. National War Savings Day gives an opportunity to register in a practical way your vow that such things must end.

OBSTRUCTION OF INTESTINE

Recently I witnessed a very interesting operation for obstruction of the intestine, and, as the trouble was not corrected, as a result of failure to find point of obstruction, I have given the subject much consideration and am anxious to read the opinion of other physicians upon this experience of mine.

The patient, a woman of about thirty-five years who had been married several years, entered a hospital for some ailment connected with her pregnancy of four and one-half months. While there, intestinal obstruction set up. She being pregnant, this, of course, was the first thing which the attending physician suspected as the cause. The obstructive symptoms were very manifest. The abdomen was very much distended and swollen; tympany was

marked; pain was intense and there was constant vomiting and nausea.

Every means to correct the trouble, without resorting to an operation, was tried, but, to no avail. High enemas were given, without affording relief. As a last resort operation was decided upon.

Being only a witness to this operation and not having seen the patient previous to this, I found it rather difficult to obtain what information I got—which was little, still, enough to make the case interesting and to cause me to give it much thought.

After opening the abdominal cavity, the small and large intestines were found to be distended with gas to almost twice the normal size. The small intestine resembled the large intestine very much and but for the structure of each it would have been difficult to identify it at first. The color appeared to be normal. The uterus was found to be enlarged, however, not beyond that of a 4½-months' pregnancy; and, as this did not seem to be the seat of the trouble, other things were thought of. Adhesions were sought, but, none found. Intussusception and impaction were eliminated. The seat of trouble could not be found in the small intestine, neither in the cecum nor in the ascending or transverse colon. Then it was thought to be in the lower end of the descending colon or the sigmoid flexure. No evidence, though, was found anywhere.

The gas being allowed to remain in the intestines, the abdomen was closed. I was very sorry to be unable to follow up the case and to learn of the final outcome; yet, notwithstanding this, I have continued to give this case much study. Having seen the operation and knowing that the trouble had not been corrected, it occurred to me that, if a slight puncture had been made in the intestine and the gas allowed to pass away, the point of obstruction could have been located. This, however was not done.

T. T. HATCHER.

Cattlesburg Ky.

[Undoubtedly it is difficult to conceive why the surgeons in this case did not tap the distended intestines permitting the accumulated gas to escape. This could have been done with virtually no risk of harm following since it would have been an easy matter to close the wound by means of a suture. However, whether it would have been easier to locate the point of obstruction

tion after the gas had been removed, seems doubtful; indeed, the failure to locate it with the intestine blown up is difficult to understand. Lastly, one hardly can conceive how it was possible to replace the distended intestinal coils into the abdomen, as everyone who has ever done or witnessed a laparotomy will agree.

As to the merits of the case itself, it is, of course, impossible to pronounce an opinion. All we can do is, to raise several pertinent questions, as Doctor Hatcher himself already has done. We should like to know a whole lot about this case and should wish to have some of the obscure points cleared up.—ED.]

FREEDOM

Ah, for one short, fierce hour to shake us clear

Of all the irksome shackles of the flesh—
For but one supreme moment to rise sheer

Of earthly wiles that tangle and enmesh!
So might the naked soul of Freedom stand,

Fronting the naked soul of her arch-foe,
One flaming bolt poised in her awful hand,
And hurl him to his instant overthrow!

The high gods answer, "No."
Soul of Freedom there is not, but, souls of
the free—

Dream of the universe waking in you and
me;

Stuff of our sleep are the shackles, the wiles,
and the toils,

Stuff of our dream are the triumph, the song,
and the spoils.

Only by sleep cometh dreaming, in watches
of night.

Only by dreams cometh waking and struggle
to light;

Only by waking the vision becomes what it
seems;

Only the dreamer can fashion the thing that
he dreams.

T. G. ATKINSON.

Mudlavia, Ind.

THE ORIGIN OF BOCHE

When suddenly at the outbreak of the war, the name *boche*, as a term of contempt for German soldiers, sprang up among the French and spread to this country, many people inquired as to its essential meaning; but, no dictionary or slang-book vouchsafed information. Then philologists got busy, and one of the most categorical explanations published was that *boche* is a contraction of *Alboche*, and the latter a corruption of *Allemand*. I confess, I have been unable to follow out the lingu-

istic commutation—albeit the evolution of Ned from Edward and of Bob from Robert is no less mystifying. Various other solutions have been suggested, more or less plausible; however, the correct answer seems to have been hit upon by Prof. L. Sainéanu, of Paris, who derives it from *caboche*; and in this he is sustained by several eminent German philologists.

Caboche is the French for head (Latin, *caput*), but by extension, also signifies a "thickhead" or numbskull—and thus, presumably, was the original application of the opprobrious contraction *boche*. In further support of this theory, Mr. Vizetelly, editor of the *Standard Dictionary*, brings out, in *The Literary Digest*, an interesting bit of history.

Early in the fifteenth century a Paris butcher named Simon Leconstellier placed himself at the head of a rebellious band and—very much like our Pancho Villa of Mexican notoriety—made himself odious by the outrages of every description perpetrated by his followers. These marauding bands, pillaging and murdering, continued to spread, so that, in the course of his half-dozen years' career, their leader became known as *Le Cabocheur*, the butcher—no doubt in a twofold sense—for, *cabocheur* was the designation of a butcher's assistant who had to split the heads of sheep, hence, headsplitter. Soon this nickname degenerated into *Le Boche* and then simple *Boche* (pronounced *boa-sh*). These lawless *Cabocheurs* were finally suppressed in 1422. It is reported that at one time they killed 3500 people in Paris during three days.

In this connection, Mr. Vizetelly mentions several other attempted derivations of this slang word, as, for example, (1) German *bursch*, fellow or lad; (2) German *buerschen*, hunt with a rifle; (3) Low Latin *boscia*, *boscium* (cf. L. *bucca* and F. *bouche*, mouth), and from that the Picardy *boche*. However, all these may readily be dismissed it seems, as also the (4) French *bossé*, tumor.

Incidentally it may be of interest to take a look at the word *butcher*, as forcing itself upon attention. The fundamental idea seems to be, to beat, to strike, as in butt. Butcher is *boucher* in French and *bochere* in Old French; and that, literally, means one who slaughters he-goats, bucks; for, the French for a buck is *bouc*, derived

from the German *bock*, and OHG. *bocch*. But, this German *bocch* (guttural ch) is related to the Sanskrit *bukka* and Zend *buza* (butza). On the other hand the verb to butt brings up the French *bouter*, Old French *boter*, and this based upon the Old High-German *bozan* (botsan), and present in the Low German *botsen* and *butsen*, to beat—the latter itself a derivative. Directly connected with this OHG *bozan* we have the verb *boss*, that which is beaten out of, embossed; which, again, appears in French as *bosse* and as *boche* in Old French.

Mr. Vizetelly mentions especially *Le Temps* of December 22, 1914 and *Blackwood's Magazine* for December, 1914, as references. From other sources, such as "Argot and Slang" (London 1889) and M. C. Donnay (a Parisian playwright), we learn that the French seemingly had forgotten the original "butcher" story and associated with the term *boche* simply the idea of a dull-witted "wooden head" (*tête de boche*) or "squarehead," blockhead (*tête carrée*), and had come to apply it to their German neighbors, notably the Alsatian peasants, who were largely employed in menial work and as wet-nurses and, naturally, seemed extra stupid—precisely as our recent immigrant among ourselves. The bitter concept now conveyed by the term *boche* is a development of the present war.

ADOLF G. VOGELER.

Chicago, Ill.

ANTISEPTIC ACTION OF ECHINACEA

The last time, I wrote about lobelia (Dec. 1917, p. 916). This time, I have an echinacea-angustifolia bee in my bonnet, besides two satisfactory case-reports.

Called some distance out in the country, I found a young married woman who nine days before had aborted at, so far as I could learn, about three and one-half months. She and her husband had been living in a tent and, while still flowing, the morning after aborting, she had walked through a drizzling rain for two and one-half miles to her husband's mother's home.

The woman was bedded in a rear upstairs room, and I detected odors as soon as I opened the door to start up the stairs. The room had three windows, and, to quote Josh Billings, "There wan't any curtains to the windows and didn't want to be any.

You couldn't see out, so, who the d——I could see in?" The sheet she lay on—once white—was a beautiful light-drab, save under the patient, where it was a dirty-brown color, owing to the lochial discharge, and when the covers were lifted the odor stank to heaven. These surroundings were in keeping with the intelligence of the people around her—I was going to say, taking care of her, but, she had no care. Her temperature was 104.6° F., the face was flushed, bowels were constipated, and, as her husband said "She haint got no appetite at all." Strange, was it not?

Well, I stood up, looked around and took a good long think. How I longed for 20 mls of antistreptococcic serum. But, there I was, 9 miles from anywhere and the people with no money to pay for it, anyway. So, I cogitated some more. I ordered the patient and her bedding cleaned up, the floor scrubbed with water containing plenty of soap and kreso dip (of which latter they had plenty). I stayed and saw that this was being done, all the time I kept a' thinking.

I found in my case about 3 drams of Lloyd's Echafolta (echinacea). This I put into 4 ounces of water. Also I dealt out 6 granules of calomel, 1-6 grain, and podophyllin, 1-6 grain, one to be given every one-half hour and followed by a decided dose of effervescent sulphate of magnesium. The echafolta I directed to be given 1 teaspoonful each hour (thinking she might as well die on echafolta as without it)

Next day, I found her improved, with a temperature of 101.4°F. Her bowels had emptied, while during the night a chunk of afterbirth, somewhat larger than a baseball and badly decayed had passed. I ordered the head of the bed raised, to aid in drainage. This time, I made the echafolta and water mixture half and half, also to be given in teaspoonful doses each hour. This treatment was kept up, and, with cleanliness and such poor nursing as the people could give, the woman recovered.

Was it the echafolta? I say, yes.

The next case is that of a young parturient Mexican girl, 17 years of age, wife of a railroad trackhand, living in a box-car such as the railroad company houses its alien workmen in. Her bed was a common straw tick, on a cast-off woven-wire mattress laid upon two sawhorses. The surroundings were squalid, filth and dirt

abounding. There was but one cup in the house, no teaspoon, three tablespoons, no plates or any dishes to speak of. They cooked on the top of a round "Oak" heating-stove, with waste wood picked up along the track. The parturition was uneventful. A male child was born, and it had all the characteristics of the race. Next day, I was called away for three days.

When I returned, the patient had had a chill, followed by fever. Her temperature was 103.2° F., the flow had stopped, bowels were constipated. As before, I cleaned out her bowel with calomel and podophyllin, followed by a saline laxative. Then I gave echafolta in 15-drop doses every hour. Next day, her temperature was down to 99 degrees. I continued the same treatment, which resulted in an uneventful recovery.

I could go on enumerating cases in which the same treatment has discouraged the death-angel and wooed the flagging power of a dying one back to health, but, I have chosen these two on account of their want of care and bad surroundings.

W. K. JOHNSON.

Haskell Kans.

GOOD-BYE, JOHN BARLEYCORN, GOOD-BYE

I.

Good-bye, John Barleycorn, good-bye,
Your sun is sinking fast;
With Congress promptly voting dry,
Your doom is sealed at last.

II.

You've held full sway for many years,
You've ruled with iron hand;
On widows' and on orphans' tears,
You've thrived throughout the land.

III.

You've pulled our ablest statesmen down,
Our poets, authors, too;
You've robbed the farm, the mine, the town,
Debauched the sacred pew.

IV.

The rag-a-muffin on the street,
The felon in his cell,
The pauper in his lone retreat,
The same sad story tell.

V.

At last, the people are aroused,
The ballot is their sword;
The cause of justice once espoused,
They'll rout the rum-soaked horde.

VI.

Our Congress blazes bright the path
The Union is our goal;
The voter in judicious wrath,
Will break the poison bowl.

VII.

If we but one and all unite
In prayer to God, Most High,
He'll give us strength to win the fight,
To make our country dry.

VIII.

Hosannas shout with swelling pride,
Glad hallelujahs sing;
For Prohibition, nation-wide,
Our efforts soon will bring.

IX.

Oh, who can paint the picture then,
Of peace and filial love,
The sweet content in homes again,
Akin to that above.

X.

Farewell, John Barleycorn, farewell,
Your mourners very few;
Whilst city, farm and charming dell
Rejoice in freedom true.

J. A. Cox.

Wheeling, W. Va.

REFLECTIONS ABOUT VERTEBRAL SUBLUXATIONS AND OSTEO- PATHY

The basic idea of Osteopathy and the kindred physiotherapeutic cults as I understand their teachings, is essentially, "relaxation and replacement." You hear them say, "Osteopathy is more than massage." Perhaps it is; certainly to the extent that an attempt is made to reduce a dislocation or a partial dislocation of any body-tissue, though it should be remembered that, besides the bones, they include in their list of subluxed tissues, nerves, tendons, muscles, ligaments, and blood-vessels.

The Osteopaths hold that dislocation or partial dislocation of such body-tissues is the initial cause of disease, following which, they allege, obstruction of the flow of blood and nervous energy along all nerves traversing the site of the obstruction occurs. From this, they deduce resultant trouble in organs, near or remote that supposedly are supplied with blood or nerve-energy by the structures impinged upon.

The local manifestation of such a subluxation is found to be tenderness on pressure—the traditional "sore place"—be-

sides, if the partial dislocation is in the vertebral column (which it most likely is), there will be a bunching up and shortening and rigidity of the erector spinal muscles that tend to pull the spine toward the side in which the dislocation exists. The engorgement of the musculature of the part can be accounted for if you recall the old Latin maxim of *ubi irritatio, ibi fluxus*.

Now, as to just what proportion of diseases or symptoms in organs of the body have origin in these spinal or other subluxations, I am not prepared to say; however, my opinion is that mostly the etiological factors that produce these symptoms or diseases would more properly be said, in the great majority of cases, to have their inception in germinal and parasitic infections in the body proper, and that the nerve symptoms found in portions of the spinal column and the region of the exit from the spinal cord, of nerves supplying such diseased organs, are secondary. Still, for the argument's sake, I am granting that they all originate in misalignments of tissues or bones and that from thence all symptoms are forwarded to the organs supplied.

Following this theory, we should find symptoms in the head, face, ears, eyes, throat, tonsils, pharynx, larynx, trachea, bronchi, lungs, pleura, esophagus, heart, diaphragm, stomach, liver, kidneys, spleen, bowels, and genitourinary system, and these would show diseased conditions according as the patient suffered from subluxations of segments in the cervical, dorsal or other regions of his backbone.

So much for the theory of the devotees of "relaxation and replacement." Now as to the treatment.

There is a strong tendency in the medical mind to wax facetious when speaking of the treatment, but, I am humbly in search of truth, and, when I asseverate that there is as wide a difference in the method of their attack as between the handshake of a gentleman and an informal meeting with a billygoat, I mean just that. For, I believe that I have been treated by all sections of what might be termed collectively "The Brotherhood of the Prod."

The Osteopath, as a rule, "feels around more," using his hand, foot, knee or the body of the patient as a fulcrum and the patient's arm or leg as a lever with which to cantilever the misplaced bones back into

place, while most followers of the other sects "get to you" suddenly and more or less unexpectedly. The point I want to make, though, is, that all these present-day exponents of "relaxation and replacement" are lame in theory and negligent in practice, inasmuch, if they accomplish any replacement of tissues subluxated, they make no effort at all to support them in place until nature can institute repairs that will retain the replaced structures in their normal relations.

For example, let us suppose that you are a patient suffering from a lame back, the result of traumatism, and are seeking relief at the hands of an Osteopath. You are stripped and laid face down on his table and the "sore spot" in your vertebral column is hunted for. "Ah," he breathes, as you give a sudden squirm on the table, "I thought so." Straightway he begins the process of "relaxation," this consisting in deep massaging; then the leverage, and perhaps (let us pray for it) your ears are to be rewarded by the sound of the "click" of the subluxated bone back into place again. You are now allowed to arise and put on your clothes, and you depart with the injunction to come back the next day and the next, and the next, and the next, and so on *ad infinitum et ad nauseam*. And each time you have it done all over again and pay a further fee.

Now, suppose a patient with a dislocated shoulder-joint should come to you. You "do" a "Kocher." Then, when the bone is duly back in place again, do you tell the patient to return every day for a month or six months and have you reset it as often for him? Emphatically, not, or you probably would speedily be in court for malpractice. On the contrary you place such supports around that shoulder-joint as will immobilize the strained ligaments and tendons until nature can inaugurate such needed repairs, while the part is at rest, as will result in the part nearly resuming the normal again.

So an Osteopath, a Chiropractor or any other man who fails properly to support a reduced subluxation, for the necessary time, should be held equally guilty before the law, in proportion to the damage inflicted upon a patient by reason of the neglect.

This much to show that the schools devoted exclusively to "relaxation and re-

placement" are, in reality, doing the least to accomplish it intelligently. What I mean to say is, that, after the patients have kept up their regular visits to the point of financial or physical weariness and have quit, they slump back about to where they were before the first visit, although they were constantly feeling better while taking the treatments.

The only defense the brotherhood of the prod offers is, that, with the improvement of the circulation brought about by the relaxation and the stimulation of the replacement, the needed repairs automatically will ensue, while, on the other hand, in some cases, fibrous deposits that have been thrown between surfaces that formerly were opposing will prevent complete reduction for a variable time. The first of these contentions is, to credit nature with the miraculous powers of repairing an injury while the part is being actively used (which it never does, never can do, never tries to do), and the second contention does not apply in any case in which an Osteopath could legally administer treatment.

One thing is quite evident. To institute such efforts at support as I have indicated, would cut out about ninety-nine percent of the income; although, somehow, I do not think that that altogether explains their negligence in these matters—there is a surprising lot of honesty among them.

I have only to add that since I have been giving these spinal subluxations more attention and been rigorously strapping the backs up with adhesive tape very few of my patients have had occasion to consult an Osteopath or Chiropractic.

J. A. DUNGAN.

Greeley, Colo.

THE MEANING OF A DREAM—ACCORDING TO FREUD

I will report a case of anxiety-hysteria in which the phobia was banished by the freudian method of treatment:

The freudian treatment of the neurosis received severe censure at the hands of uninformed critics or those who only have tried the method without years of preparation. I can imagine a man without surgical training looking askance at the advisability of doing abdominal surgery, judging from his own results. This should not deter a trained surgeon from using his skill, after convincing himself, by extended prepara-

tion, that abdominal surgery can be done, with startling success, if the operator has had adequate preliminary training. The warning of the man who speaks "from experience" will be taken seriously by many who have not investigated the primary cause of the untrained man's failures.

The ability to use Freud's method is not mastered in a few months of prejudiced effort. In fact, after years of the most painstaking study, the wonders of the treatment just begin to be realized. I will omit all detail in the present case, and I shall make no mention of the hours of toil and research involved. I will give only the most obvious mental mechanisms in the case, with no attempt to defend the mechanisms as complete.

Some of the leading neurologists state emphatically that no complete understanding of patients can be had unless the methods of psychoanalysis are used. I absolutely agree with that statement.

The patient was a woman of 35, mother of two children (had no miscarriages), very emotional, cried most of the time, though always was well and strong. Family-history was negative, also the physical examination. The complaint was, she was afraid her husband was going to leave her.

I asked whether she could recall anything in childhood that caused her any emotion. "Yes," she said, "my father left my mother when I was but three years of age." Many other experiences, consuming weeks of time to narrate, are omitted.

It would seem, at first glance, that there was sufficient reason for her fears, as she had watched and wondered at her mother's sorrow and trials from being deserted; but, analysis showed something deeper in her emotional life. I called attention to the fact that, because her father left her mother, was no reason why her fear of her husband's leaving her should be borne out in fact. She admitted that they were devoted to one another and that she had no reason for her fears. Both were members of the church and they were church-workers. She now recalled worrying about her husband's playing cards, as she had thought he was opposed to it. She was very keen in noticing every change in her husband's actions and interpreted these along the lines of her fears.

After listening several weeks to her experiences and associations, I asked her

about her attitude toward men. "Very modest, always. I never look at a man when I meet him on the street," she said. "Why?" I asked. "I do not know." "What would you do when finding yourself approaching a group of men?" "I should not pass them." "What would you do?" "I should cross to the other side of the street." "Is that a mere whim?" "No, sir, it is not. I could not pass them." This seemed an important symptom to pursue. "Do you pretend to tell me that you would ruin a new pair of shoes by crossing the street full of mud, instead of passing a group of men?" "I certainly do. No power could make me pass—I first should die." This seemed a bit overdrawn. "How do you account for such a mental compulsion?" "I am sure I do not know. It is very annoying." "Well, your dreams have helped to clear up so many things in the past that they will, no doubt, throw some light on the situation; therefore, do not fail to write out all of these, as we are at an important level in your return to a healthy mental state."

For those who are not familiar with the interpretation of dreams, I will state briefly:

Dreams are perfect psychological mechanisms, composed of two parts and expressing a wish-fulfilment. The first part is known as the manifest part, the second part is called the latent part. The first part is what one remembers on awakening in the morning. A dream often is confused and to the dreamer it may seem foolish, nonsensical, and to contain things never thought about. So, on this basis, dreams are called of no account. Dismissing a dream as of no account, does not dispose of the fact that dreams, when understood, are of the greatest value; in fact, they are absolutely necessary for the understanding of the hidden material in the mind. It seems foolish, since the censor that sits at the gate of the mind does not let painful, shameful thoughts come back in the same form that they were forced from consciousness; therefore, it is necessary for these thoughts to return masqueraded and to be viewed as foolish, since the censor will not let them through if the disguise is not adequate; thus causing a stirring up of the dream-elements, and a confused dream results or can not be remembered on awaking. The second part, with the dis-

guise removed, is the real part of the dream, and it contains the wish.

I will now give the dream that showed the patient much repressed mental material, and it resulted in her loss of the fear that her husband was going to leave her. The dream uses symbols for the various disguises in the dream. Long objects are used to represent the male organ in sex-dreams, openings represent the female parts.

Relating a certain dream, the woman said:

"I dreamed I was upstairs in the attic, with a machine-gun pointing through the open window. Over a hill were some Germans appearing. I began to shoot, but, they surrounded the house and I was captured."

She laughingly remarked: "Do you think it is a wish of mine to be captured by the Germans?" I answered "I do not know. We shall see by interpretation what your associations bring out."

Before proceeding to the dream-analysis, I will note briefly some of the symbols used by this dream. All analysts know that "upstairs" means the sex-act; the open window is symbolical of the female parts; the barrel of the machine-gun of the Germans represents the penis and is symbolical of rapine as suggested by the war.

With this brief, and in no way complete, showing of the dream-material, I asked what came into her mind when she thought of a machine-gun. She said, "Something that shoots a number of times." Then what do you think about?" "A man." "Be more explicit." "I think of a man's private parts." "What comes into your mind when you think of being captured by the Germans?" "What they did to the Belgian women." The wish in your dream is then, that you do want to be captured by the Germans; or, in other words, you have a repressed desire to know more men intimately—which means the same thing."

The effect produced by the uncovering of such a repressed desire and the patient's becoming conscious of the fact must be witnessed to be appreciated. The facial emotion and trembling are convincing that some heretofore unknown mental element has been forced into consciousness.

After some hesitation, she said, "I now see many things very plainly that I have never understood. I have something further to confess: I never go to church

without looking over the congregation and making a mental note of the men I should like to know intimately. That seems a dreadful thought!" "You have now given me the needed information to enable me to explain your mental trouble to you." And this is what I said to her:

Fear of your husband leaving you is a wish; as it would cut one legal reason why you should not know other men.

Your not looking at men on the street was a defense-reaction, as by your apparent modesty you convince yourself that you are a virtuous woman.

Passing a larger group of men represents the ones you look at in church, and you think they are thinking about you what you think about them. (Righteous judgment.) This line of thought is so disturbing for a woman who is striving to overcome her desires that it becomes the reason why you are unable to pass. You can pass one or two men, but, an increased number of men increases the difficulty.

Your church alliance was, to help you to satisfy your consciousness that you are a good woman; but, in the realms of the unconscious, animalistic part of your nature, you had a desire to know more men. This desire was protruded into consciousness and it was changed to a fear of the very thing you unconsciously wished for. This desire made you less anxious to please your husband, and I have no doubt that his going away to play cards was, to avoid an undefinable something he felt coming from your unconscious, a sort of an I-don't-want-you-around sensation.

After the patient became fully conscious of the repressed thought-material in her mind, she reacted by publicly reconsecrating her life to the church on the following Sunday. On her return home, two maids were discharged, and the surplus energy that had been accumulating by inaction was used up in doing her own work.

Weeks afterward, she reports that the oldtime fear has entirely left and that life now is very much worth living.

O. B. A.

—, Me.

THE RECOGNITION OF PAIN

In reference to Doctor Jones's article on the diagnosis of pain, in *CLINICAL MEDICINE* for May (p. 384), I will refer you to the following two signs:

1. Mannkopff's sign: Take the pulse rate before, during, and after pressure is made upon the sensitive area. If the pulse becomes increased in frequency, it is a proof that the pain is genuine.

2. Sign of Loewi: Dilatation of the pupil is in direct proportion to the intensity of the pain. Thus, if in a healthy man one exercises energetic pressure on the testicle, the pupil dilates, whereas, in the tabetic in whom the testicle is insensitive, no pupillary dilatation is observable.

This statement is taken from Abram's "Spondylotherapy," page 70.

Observe that the sign of Loewi is the very opposite of the pupillary condition in pain as given by Doctor Jones.

L. I. BOGEN.

Lincoln, Nebr.

"CLINICAL MEDICINE" IS A MONEY MAKER

I have treated 11 cases of morphine habit in accordance with the article on luminal published in your May number, at \$150.00 each and had fine luck with all.

Have had equally fine success from other articles on different diseases, and see no reason why a good student should not keep abreast of the times by reading *CLINICAL MEDICINE*.

I am in service and have been appointed major, but will continue to read up.

C. W. BAYNHAM.

Dallas, Texas.

That is good to hear. Many physicians inform us that here and there they have received valuable and, often, money making suggestions from reading *CLINICAL MEDICINE*. Certainly it helps to study a good medical journal.

THE SCANDAL-MONGER, "URIC ACID"

"When those who should know are mere gossipers and repeaters, what is a poor man to do?" This from a patient who had written in an earlier letter that "I have pains and aches and know it is uric acid in my blood."

Gently, patiently, though hopelessly he was warned against the repetition of the silly, incorrect doctrine, that any disease or symptom was caused by uric acid—as normal a thing as food or blood. Came



Good Advice!

then his second letter, in which he said that Prof. So-and-So was his "authority" for blaming this old-time scapegoat.

As he justly wails, if some doctors still help medicine-bottle labels by crediting sickness and disorders upon uric acid, which is a natural end-product of many foods, it is almost a waste of effort to try to teach the average person the truth.

The "uric acid" nonsense is a typical example of German-like propaganda. It is proof that, if enough voices, enough books, enough lectures, enough advertisements are worked repeatedly and loudly, the most absurd untruth will be accepted by the most intelligent as the truth.

The proofs that the activities associated with uric acid are sheer romance, and not real, have been repeated many times for several years. Yet, scarcely a day passes that physicians fail to be connected by patients with the home-made decision that the sufferer's troubles are due to "acid" conditions, and "uric acid" in particular.

Uric acid is one of the waste products or end-articles of albuminous digestions.

Whenever proteins or other such victuals break up, uric acid is formed. The wear and tear of our own healthy flesh, no less than the fermentation and digestion of food, makes uric acid. The elimination of uric acid in the kidney fluids is a continuous and normal activity, which is usually increased with the ingestion of foods rich in nitrogen. It is, therefore, not uric acid which is the source of joint disorders, fat accessions, high blood pressure, eczema, arteriosclerosis or almost any of the other ills which the flesh acquires, but, it is any or many of the several protein excesses present in too much albuminous pabulum that causes the trouble.

A low protein diet, one in which fleshy and fishy, albuminous vegetative products are greatly diminished will assist the health of many having the symptoms blamed upon uric acid. This is because such a rich diet puts too great a stress upon the blood and other structures in a variety of ways—not because of the incriminated "uric acid."

The influence of uric acid in diseases credited to it was doubted by several young

physicians and research-workers as long as twenty years ago. Such, however, was the hold it had upon the medical world, by dogmatic repetition, that it was impossible until recently to uproot the error. These young men were scoffed at for doubting its influence on health.

Researches conducted recently by Doctor Mendel and others prove that soups, broths, tea, coffee, cacao, and the like increase the amount of uric acid. Like nitrogenous rations, these change more or less into uric acid (which contains nitrogen) and allied products. More of it than usual is then found in the kidney fluids. When you drink coffee or broth, it is excreted through the kidneys, in most part as ammonia-like compounds called uric acid and urea. It is the caffeine in the coffee and substances similar in character in soups, tea and cacao that appear to augment the uric acid.

Beware hereafter about crediting uric acid, which is always present in man, with the damage or disease due to something more difficult to discover.

LEONARD K. HIRSHBERG.

Baltimore, Md.

[The fact that uric acid is "merely" an end product of protein metabolism does not exonerate it from the possible charge of being responsible for, or at least indicative of, disease. An excess of uric acid certainly suggests a faulty metabolism; in itself, it may give rise to distress and other symptoms of disease, and requires active treatment for relief. True, such treatment is symptomatic. Yet, is any treatment to be condemned on the ground that it is symptomatic? That would be utterly foolish; for, it is relief from distressing symptoms that the patient consulting us desires. He neither knows of nor cares for underlying causes, leaving these for the physician to determine and eliminate. What he wants, and is entitled to, is, relief—symptomatic treatment. Hence, measures taken for the purpose of reducing the excessive uric acid are not irrational, even though it must be admitted that they must be supplemented by "causal" treatment.—Ed.]

HECLA LAVA, HOMEOPATHICALLY FOR EXOSTOSES

Dr. Jas. Garth Wilkinson, an eminent London physician, a licentiate of the Edinburgh University, not only was a very successful physician, but, likewise, a close sci-

entific investigator. During one of his mid-summer outings in Iceland he noticed that many cattle had bony growths of the inferior maxilla and the long bones. Upon investigation, he found that the cattle having these bony enlargements grazed in meadows where the ashes from the volcanic eruptions settled on the pastures.

On returning to London, he took some of the lava with him, had it analyzed, and found that it contained silica, aluminum, calcium, and magnesium compounds, and some ferric oxide.

Believing that it would be efficacious in exostoses of human bones, he prepared a homeopathic dilution from the lava and gave it to patients so affected, and he was delighted with the results.

Dr. J. Compton Burnett, another eminent London physician, was especially pleased with the results in bone tumors. Favorable reports from other physicians confirm the value of this lava in bone necroses, while one especially favorable report comes from a reputable physician in the cure of a sinus following a mastoid operation. I myself have found the lava beneficial in exostoses. My personal experience with leontiasis ossea and in hyperostosis cranii is limited to one case, and that as follows:

A spinster of 45 years consulted me and gave the following history: A few years previous to seeking my advice she first noticed a slight enlargement of the lower jaw, which gradually extended to the upper jaw and occipital bone. She had consulted eminent specialists of Boston, New York, and Philadelphia, but, none gave any encouragement. She was then taking pituitary and thyroid preparations, prescribed by a New York alienist, but, without receiving any benefit.

Hecla Lava, 3X, was given internally, and a 10-percent cerate of the same for external application. She remained only a few weeks under my care and during that time there apparently was a slight improvement in the arrest of the growth and more especially in the discomfort attending this unusual disease. Subsequently she removed to California and the treatment was discontinued. After her removal to California, the writer is not able to give a history of her case up to the time of her death, which occurred three years after.

H. F. BIGGAR.

Cleveland, Ohio.

In the World War

THE MAKING OF AN ARMY MEDICAL OFFICER

Traveling on a Troopship.

At last we are relieved by overseas orders. Surrounded and shrouded in secrecy they were. No word was given the men, but, all leaves of absence and passes were taboo. Equipment was checked up and completed. Special overseas equipment was issued to the medical officer, and his quota of enlisted men was assigned to him; the troops were ordered to remain close around their barracks, extra clothing and supplies were packed or crated. So, while no definite orders were given, every man knew that our stay was short.

One frosty morning we fell in and marched to a train that was waiting with steam up. No gay hurrahs, no posies-on-their-guns gayeties. Just a quiet, business-like little march to the train, each man intent upon his own thoughts. The train pulled out immediately after we were loaded, and, with closed windows and doors, we were off. Detrained after a few hours' run, we were marched onto a government tug, a frosty trip over the harbor to the wharf, off the tug, then up the gangplank of a grim war-painted monster, which was to be our home for the next few weeks. Several very business-like-looking guns at different parts of her deck gave her a grim chip-on-the-shoulder appearance and were wonderfully reassuring.

The men were assigned to their respective sections and the officers to staterooms—three officers to a stateroom. The warmth of the ship was very welcome after the cold trip. As is the usual custom upon reporting at a new post, each M. O. that had accompanied troops, on board, reported to the senior M. O. in charge of the troops; and that evening, after supper, we all met, with the ship's surgeons, and a tentative plan was drawn up as to how best to care for the thousands of men on our trip across. Hours were decided upon

for sick-call, ship inspection, inspection of the men for contagious diseases, venereal diseases, ship-sanitation, ventilation, disposal of waste, and so forth. Each M. O. was assigned to a certain section and was made responsible for the men there.

Next morning, sick-call was sounded at 8:30 a. m. We each repaired to the section to which we had been assigned and notified the officer or noncommissioned officer in charge there to look up his sick. The men soon lined up. Each M. O. had a box marked with a Red Cross containing swabs, cotton, bandages, epsom salt, Brown's mixture, castor-oil, tongue-depressors, and the ever present iodine, while in a belt around his waist he carried hard-rubber bottles of tablets for colds, pains, coughs, et cetera, a bottle of aromatic spirits of ammonia, a hypodermic syringe and tablets, thermometer, and a very efficient little case of instruments. So, with his enlisted men of the medical department to help, the M. O. handles quite a line of men in a short while.

As I lanced a gum over an abscessed tooth, with the ship rolling and pitching, my body at an angle of about 35 degrees, legs far apart, the soldier hanging onto the companionway, to keep erect, swaying with the motion of the boat, I could not help thinking of the difference between these surroundings and a modern operating-room where are bright lights, aseptic precautions, and all that. Afterward, lancing a boil was a common affair. Work as a whole, however, was of minor nature—swabbing throats, seasickness, cinders out of eyes, constipation and its myriads of consequent psychological ailments, a few cuts and bruises, a dislocated shoulder, and so on. The few patients with contagious diseases that showed up were promptly sent to the ship's sick-bay, and, by our prompt isolation, we managed to hold contagions down to a minimum.

Sick-call was sounded twice daily—at 8:30 a. m. and 3:30 p. m. Those too sick

to answer sick-call we visited in their bunks. The afternoon of the first day out, all the army-officers representing the different units on board—cavalry, infantry, artillery, quartermaster, medical, aviation—were ordered to assemble in the smoker. Here, the ship's executive officer outlined to us the rules, safeguards, et cetera, to be

plenty of musical talent among the troops on board and had a musical program at noon and evening meals. Were it not for the rolling and pitching of the boat, one would think himself back in a Chicago hotel.

The dishes were of the "ambulatory" type, at times, owing to this small roll. One would reach for an orange and it would roll toward him, or he would put his spoon in the soup and hit the bare bottom of the plate, the soup being washed over to the other side of the plate, and he would have to wait for the ship to right itself and the soup to wash back.

Many were the incidents to relieve the monotony of the trip. A ring was roped off on the after-deck, and there were boxing-matches among the men, with an army chaplain acting as promotor. "Repel attack" and "abandon ship" drills, where each individual soldier, with a life-belt around him, repaired to his station, each man being schooled as to his exact station. These drills permit of no waiting to carry luggage or to pack up, and it was amusing to see the colored waiters in their white jackets, with life-preservers on, dash quickly but orderly to their station or life-raft, at the bow or stern, the wind flapping the corners of their coats, while, vomited up from the very bowels of the ship, it seemed, came the coal passers, stripped to the waist, sooty and grimy

with coal dust and sweat, to take their station by the side of the white-clad waiters.

The guns were hastily uncovered and the gun-crews went through their drill of sighting, loading, and firing and traversing their pieces; and very business-looking and efficient they appeared. While we were dressed in our woollens, these hardy sons of the sea went about their work in bare feet and open shirts, seemingly with a very wholesome contempt for the weather, restless as the caged lions in the zoo, ever alert and peering over the waters.

Early one morning, one of our lookouts sighted a small ship away off on the hori-



observed on our trip, to outwit the submarine menace.

Each of the ship's surgeons was the personification of politeness, offering us every aid, assistance, and advice. In their natty blue uniform, they looked quite picturesque against a background of the army khaki. The ship's officers also extended every courtesy and privilege, saying to us, in fact, "Gentlemen, the ship is yours."

All the officers, both army and naval, ate together in the dining-room, or saloon. Here, we had excellent meals served by colored waiters, who were enlisted men of the Navy. We had no difficulty in finding

zon, making unmistakable signals of distress. The escort was signaled. They signaled back for the troop-ships to lay to, and a warship cautiously approached, not knowing but that the call might be a ruse of some sort. It was discovered to be a small schooner blown off her course, her rudder gone, leaking badly, and her

great many of the men were seasick, still, this soon wore off. Fortunately, I myself was not seasick at all. At any time I felt at all squeamish, I took a few Abbott's antinausea tablets, of which I had brought a bottle, and am convinced that they helped; still, I can not give them all the credit, for, there were many officers and men aboard who took nothing but a physic and they also remained free from seasickness.

When we left the States, it was below zero weather, but, the first day out, we struck balmy weather, and it was great to sit out on deck in a steamer-chair smoking a cigar and thinking of our fellow practitioners back in the States struggling through the snow and ice. Like the Wandering Jew, on and on we go, day after



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Brooklyn, N. Y., Y. M. C. A. Members Being Trained
for Red Cross Service in France.

pumps about worn out. So, the warship took the crew off and set fire to the wreck, so that it would not be a danger to navigation. Then we resumed our course. Each forenoon, the troops were ordered up to the upper decks by detachments and



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Next—A Safety Shave.



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Motorcycle Ambulance.

marched around or doubletimed around or given setting-up exercises. Thanks to the weather being exceptionally fine practically all the way across, in addition to these exercises, the men kept in excellent health and spirits. True, the first few days out, a

day, not seeing a ship save our escorts, go to our berths at night after a last look at the phosphorescent wake of the vessel, and the ever vigilant lookouts, groping our way around the deck, where it was as dark as a pocket, all the lights being out, down a slippery companionway, to the lower deck, with its faint blue light burning, undressing in the dark. Mornings, shortly after daylight, we were aroused, by a knocking on the side of the staterooms, by a ship's orderly, with a "Time to get up." Just time to wash and dress, then "Breakfast is ready." Up to the dining-room, with its snowy tablecloth and its appetizing food and excellent coffee. Just about finish it and the clock is pushed up to correspond with the time we have gained, traveling toward Greenwich. Then sick-call is sounded, and we are in for another day of it. Church services were held the

two Sundays we were on board by the chaplain and were well attended.

What a thrill was felt by everybody when one morning we sighted the rest of our escort of warships, for, we felt then that our long trip was nearly over, but, also, that we were approaching the really dangerous zone. Fleet destroyers came upon us so quickly that they seemed to come up from the ocean itself. Like grey-



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Taking Care of the Men's Feet

hounds, they seemed almost to leap from wave to wave, now cutting across our bow, around our side they glided, around our stern and up to the bow again, literally running rings around us, as easily as if we had been standing still. They proved their worth, too; for, as we were almost in port, away off to one side we saw some streaks of foam on an otherwise smooth water. One of our escort made for these streaks at a tremendous speed, firing as it went, for, the streaks proved to be subs. Later, we were told that they had got them both with depth-bombs.

There was a cheer from thousands of throats when we dropped anchor in the mouth of the river among other ships, and, when the tide was favorable, we pulled up anchor and slowly made our way to the dock. There, the quaint buildings, with their foreign names, French soldiers in their horizon-blue uniforms, and rifles, with fixed bayonets, slung over their shoulders, guarding German prisoners, who were at work on the docks, the foreign tongue with which we were hailed by the boatsmen who were rowing their small boats along side, proved interesting sights. A dog on the wharf barked at us in English, and it sounded strangely good to hear it. Scat-

tered along the wharf, were American sentries and as we came closer we saw more American uniforms. The yellow flag of quarantine was run up to the masthead, the M. O.'s were instructed once more to inspect the men on board for venereal disease, and, after harbor regulations were complied with, the yellow flag was hauled down and the work of unloading began. Motor trucks took our stores and impedimenta to our camp, the men fell in in their detachments and marched up a few miles to a rest camp. We were here for but a few days, but, took the opportunity to change for French money whatever money we had with us. Then again we pack up, this time into a dinky little train for a day-and-a-half's trip into the interior. The French railway-cars are much smaller than ours, seeming almost like toys compared with our Pullmans. Officers traveled first-class, the men, third class. As there were no sleepers, we pulled the seats out and slept reclining, with our overcoats thrown over us. The first-class coaches were equipped with toilet-and wash-room, the third class were not, the men relieving themselves at regularly designated stops, so, I restrained my usual lavish habit of handing out compound cathartic pills to the men on sick-call.



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German Wounded Being Treated by British Doctors.

We passed through old villages, where sometimes the train would stop for several hours. Here, the men were split up into detachments, in charge of sergeants, and marched around for an hour's exercise. I, with the commanding officer and the interpreter, would visit the points of interest within short walking-distance of the train, the restaurants, where we ate many a good meal for a few francs, the old

Gothic cathedrals—wonderful from an architectural standpoint, inside, the enormous pillars, the vaulted roofs, the flagstone floor, their many altars, before which were offering-boxes, and into which we dropped a few coins; outside, were the spires, the Gothic doorways and windows,



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Advanced British Dressing Station in Palestine.

the old clocks. The streets were narrow; in most places we found bookstores, where we could buy war-copies of *The Chicago Tribune* and *The New York Herald*. Then into the train again and, on our way.

Arriving at our destination, we were assigned to quarters in an inland town, in an old monastery—a massive building, built about the seventh century, and, judging from its appearance, it will last at least another few hundred years. Over the doorway, there is an old sun-clock, the first I had ever seen. An iron rod projects out from the masonry, with a dial beneath it; as the sun moves around, it casts the shadow of this inclined rod on the figures, thus telling the natives the hour of the day. Inside this monastery there were broad stairways of stone or cement. We were quartered upstairs, the men in big squad-rooms, double tiers of bunks having been built to accommodate them, the officers, in smaller rooms adjoining. They were severely plain rooms, with high ceilings and barred windows, which at one time had been the abode of monks. There were four buildings here, arranged in a square, a church forming one corner or side. In the center of the four buildings, was a courtyard, where bushes and flowers were blooming. One room on the ground floor had been used by the French Infirmary.

This we used for our infirmary. I, with two other M. O.'s from two other detachments of American troops, consolidated our medical supplies and held a combined sick-call. From a nearby American hospital, we procured additional liquid drugs and prescriptions, and such equipment as we were unable to carry with us. Thus we were able to handle the hundred and one little ailments that will turn up among several hundred men. The contagious and really sick patients were promptly sent to this same hospital.

Afternoons and evenings, I wandered through the town. The people of the town were very polite and showed us every courtesy. Prices had not as yet advanced,



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French Red Cross Workers in Winter, at the Verdun Front.

as they do in most cities and towns where troops are stationed. The people wear wooden shoes and make quite a clatter walking through the cobble-stoned streets. The children all gave us a military salute as we passed and say, "*Vive l'Amérique*." We salute and reply "*Vive la France*"—which pleases them immensely.

A French officers' training camp near us filled us with interest. Here, were mimic trenches, dugouts, bombproofs, and barbed-

wire entanglements. Here, were held sham battles that certainly were about as realistic as the real thing. The French, surely, have a splendid fighting-spirit. Here, one Sunday, I saw these French cadets play football, and finer specimens of physical manhood I have never seen.

I was here but a week, then was detached from my squadron and ordered to a base hospital. I left the squadron with sincere regret, as I had formed many firm acquaintances both with officers and men. With two other M. O.'s, I boarded a French train and started toward the base. We rode all night, reclining, as usual, on the cushions and covered with our overcoats. Next morning, we stopped over for four hours at a French city. We repaired at once to a hotel, washed up and had breakfast in this place, afterward wandering around the city. We saw the long houseboats on the river, on which the women of the district do their week's washing; passed over the old stone bridges spanning the river; viewed the statues of statesmen and warriors, a large French hospital for wounded; saw detachments of troops, coming and going, to all appearance, continually. We visited an old chateau of the seventh-century period, surrounded by what once was a deep moat, but, now is used as a garden. Piloted by a voluble French caretaker, we saw the old dungeons where the chains and fetters are still cemented into the walls; in another place, the bullet-holes in a wall where at one time firing-squads put the "finis" to condemned prisoners; up and down secret stairways, finally arriving at the topmost battlement. Here, on the very top, as an example of thrift or of war conservation, there was a small garden, kept by the caretaker, fully two hundred feet above the ground. From the top, we had a most wonderful panoramic view of the city. We reached the street entrance again by more devious passageways, gave our conductor a few coins and left, followed by her grateful "*Merci, merci, messieurs.*" Then we returned to our hotel, and even in this period of food shortage we had a really

excellent meal for only four francs a cover.

After dinner, we walked to a tobacco-store, to get a cigar; for, unlike our American restaurants, the eating-houses here do not sell cigars, chewing-gum, and such. The tobacco-store sells tobacco only and the eating-houses sell food and drink only. In this city, I saw, for the first time, women operating both ends of trolley cars, driving and collecting fares, and on the train which we soon boarded to continue our trip we had a woman porter to handle our hand-baggage. Aboard our train, were also a number of French officers home on leave, and at every station, we passed troop-trains loaded with French soldiers, also on home-leave. Through the country, along both sides of the track, the spring ploughing was already going on, and this late in January. At stations where we would stop, on getting out to stretch our legs, we were gazed at with much interest by the people and the trainloads of French soldiers on the sidings, and we heard many whispered, "Americans". Evidently not many of our troops had as yet passed there.

We felt rather proud that our U. S. uniforms attracted so much favorable interest so far from home. Arriving finally at our destination, we alighted from the train, registered our names and our orders giving us the authority for being there with the American military police at the station, and surrendered our railroad-ticket to a railroad employe (by the way, it seems to be the custom here to give up your ticket when leaving the train) and passed out to the street. As I had been to this city once before, I had no difficulty in finding our way to a cab-stand and hiring an antiquated fiacre to take us to the American Hospital. We arrived just at supper-time and, fortunately, were met by the adjutant and shown to a seat in the mess-hall, where the working-force of the hospital (the medical officers and the nurses) were at supper. The following morning, we reported to the commanding officer and were assigned to duty.

ROBERT C. MURPHY.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from June issue, page 477.]

I AM NOT a preacher, but a sermon I heard in a little village not long ago has prompted these lines.

The minister was tall and angular, of dark complexion and slightly bald, his hair being combed smoothly and skillfully in front of his ears. His long upper lip was smooth shaven, as were the somewhat cadaverous cheeks; the chin was concealed by an ample growth of coarse beard, the effect serving to give prominence to the straight, hard lines of the mouth. He announced the opening hymn, reading the first two stanzas with slow, peculiar unction:

Tremendous God, with humble fear,
Prostrate before Thy awful throne,
The Word unchangeable we hear,
Thy sov'rein righteousness we own.

'Tis fit we should to dust return,
Since such the will of God most high:
In sin conceived, to trouble born—
Born to lament, to toil, to die.

The choir executed this dirge in long metre, and, as the last doleful notes subsided, it was natural that the smitten hearts of the congregation should be sufficiently receptive to await meekly the impressions designed by the subsequent discourse.

The reverend gentleman arose solemnly, his countenance assuming a graver, more forbidding aspect, as he read the 26th chapter of Leviticus and then announced his text from Mark XVI, 16, "He that believeth and is baptised shall be saved; but, he that believeth not shall be damned," the closing anathema being fairly hissed at his auditors, as he leaned over the pulpit, with quivering beard and foreboding expression, as though he were cursing his congregation, rather than repeating Scriptures.

It occurred to me that this high priest of the revealed religion, the highest gospel of which is love of our fellowmen, would not be disheartened by the eternal perdition of certain members of the congregation, and

that possible salvation for all would be as serious a calamity as universal destruction; there was not a hint of a compassionate and loving Saviour—only the implacable wrath of a monstrous and vengeful deity.

Continuing, the preacher endeavored to impress upon the minds of his affrighted hearers the absolute certainty of future retribution, by reminding them of the burning tares, the casting away of bad fish; and, to urge a more personal terror, he dwelt with apparently grim satisfaction upon the unprofitable servant doomed to outer darkness, the foolish virgins shut out from the marriage-feast because they were too late, the everlasting misery endured when the wedding-garment was not at hand, the fig-tree blighted because of its barrenness, the unused talent, and so along. "Wide is the gate," he shouted, with awe-inspiring gesticulations, "and broad is the way that leadeth to destruction, and many there be which go in thereat; narrow is the way which leadeth unto life, and few there be that find it."

The closing words were uttered with a demoniacal screech—the climax of an ever-ascending voice—and the congregation shuddered with horror as the speaker's long arms waved aloft in the fury of his dire prophecy.

As he proceeded to depict in glowing, nay, seductive language the temporary allurements and attractiveness of the broad way, I could not but remark the graphic character of the scene portrayed and touches of youthful, even riotous life, too realistic to be ascribed to a vivid imagination alone. I listened the more attentively, therefore, as the preacher's harangue led him to delineate the awful punishment awaiting those who failed to take the narrow way, with all its devious, scarce penetrable windings, its midnight darkness of isolation, its withering despair. With fervent eloquence, the orator laid bare the inmost sufferings of

him who, yielding to temptation, sought relief from earthly troubles in indulgences, too surely to be followed by poignant regret and shame. This stern, narrow way—how eloquently he portrayed its course, marked ever and anon with sign-posts reminding the traveler of duties, *duties*, none of which were pleasant, but, inflicted by God, to purify His children, so that they might enter the heavenly kingdom after much tribulation.

Wo to him who for a moment, even, in the agony of spiritual torture, rebelled against the Master's scourge! Wo to him who, lured by dreams of rest and peace, succumbed to temptation—who in the extremity of his pain clasped to his bosom the mocking image of human happiness! Above all, wo to him who, seeking relief from earthly care and the solitude of Ishmael, in defiance of law and society, sought repose in the love of her for whom his hungry soul had waited in breathless prayer and longing, filling the empty niche in his lonely heart and answering his stifled cry:

No one is so bereft by fate,
No one so utterly desolate,
But, some heart, though unknown,
Responds unto his own;
Responds—as if with unseen wings
An angel touched its quivering strings
And whispers in its song,
"Where has thou stayed so long?"

For him—poor, deluded dreamer—not the chastest resolve, the warmest, noblest affection and self-sacrifice would answer in the day of judgment, but, only the reward of a common felon spurned by the Lord of Christian men and the good influence of churches? Who led the sentiment for liberty in this country before the shots were fired at Lexington and Concord and Bunker Hill? Who has led in every worthy movement but Christian men—Christians in the big sense?

Science, scholarship, brains will take care of the letter and the doctrine. Let us have now the full measure of the spirit and the life. Good citizenship is good Christianity, and good Christianity is good citizenship.

We should believe in humanity and in the moral relations between our lives and the lives of others. We have powers to be developed for noble uses. We should cultivate high ideals. The modern idea of religion is preeminently a social ideal, and it

must express itself in some social way. It inspires to united effort, and does not drive the individual into selfish isolation. It is well to be alone with one's soul at times, of course, to be much out of doors, among the immensities, to look beyond the horizon and past the things that are temporal and seen. But, oftener should the mind refresh itself among its kindred and have intercourse with great souls and strive in every way for higher things rather than for mere selfish pleasure. There is something in life besides pleasure and business. We should know how to live. The cry of today is for higher types of men; men fit to create a nobler, happier, healthier society. We either are here for no intelligent purpose at all or we are here to make another connecting link from the dying past to the living better and more beautiful future.

* * * *

Meats and Morbidity

In a western town that I used to know there was an entertaining though otherwise useless man who devoted his life to resting, living at the one hotel on terms of fraternity with everyone, indifferent to an account that he couldn't have paid, anyway. At the end of a year, the embarrassed landlord took him aside and said, with tact:

"Of course, I know you're good for what you owe me, Bill, and I'm not dunnin' ya'. But, it'd help out a whole lot if ya' could rattle up some of it today. So many eats and so few pays 'at I'm away behind with the butcher, an' he won't let me have no more meat 'till he gets some money."

"D'ya' mean to say he's shet down on ya' jest for a little thing like that?"

"That's what."

"The Walla-Walla horse-thief! We'll jest show him. I'll stick by ya'. You tell him to go to heliotrope with his beef-critter stuff, and we'll worry through on vegetables."

This heroic course proffered possibilities, if tempered by judgment and a little knowledge of the chemistry of plants. Anybody can worry through on vegetables, with benefit—after a time, with entire comfort and, probably, improved health. In saying this, I do not postulate vegetarianism, which is a cult and, as ordinarily followed, a rather poor one. But, I do mean to say that flesh foods can be greatly reduced or

dropped out altogether, without ill results to general health. Here is the reason:

We require protein. Muscle and bone must be nourished. Meats convey the proteids necessary toward that nourishment, but, they are carried in more assimilable forms by such soft and clean foods as eggs, milk, and cheese. The products of poultry-yard and dairy, bulk for bulk, will do as much for us as meat in any form, do it better, and free us from that positive harm that follows the excessive use of meat.

Only a small part of the contents of meat gives us the aliment we want. The juices furnish proteids, the filers do not; and meat is mostly fiber. To get proper nourishment into a vigorous body, five parts of meat must be chewed for the sake of one part of juice. Digestion of fiber imposes overwork on the whole digestive apparatus. It is extra duty, that must be performed to realize the value of the minor quantity. These waste foods create waste products, which have an unvarying tendency to clog the stomach, liver, kidneys, and lower intestines—to accumulate there and set up ferments of decay; to become poisons of insidious sorts, generating diseases that often are hard to get at. To eat meat freely, is, to invite autointoxication; eating meat carelessly and without an intelligent admixture of vegetable foods, insures it. To reduce the meat ration and increase the vegetable, is, to bring about a partial balance. To shut off meat and take our proteids in gentler and purer form, with the necessary hydrocarbons and those vegetables which carry the various salts necessary to perfect nutrition, is, to establish an actual balance and set up a firm state of health.

In these days, prejudice has no place, and habits can be viewed as subject to change and complete dismissal. We have come a long way out of the old and stupid belief that we are heirs to the appetites of generations gone before. It is not so. I make that statement broadly, and with emphasis. We inherit far more on what I will call the psychological side of our organisms than on the physical side. Someone has said that every man is an omnibus in which ride all his forebears, and in terms of character that saying comes pretty near to a solid truth. But, in physical habit, the force of inheritance is a movable or vanishable quantity.

Psychology is too vague as yet to deserve a place among the sciences. It handles its data awkwardly, like a short-fingered, nearsighted man sorting potatoes. It has reached back into the human mind far enough to discover that the direction of thought may be changed or determined by an exercise of will-power, but, it still is in the dark concerning the faculty that in turn sets the will-power in action. As yet, it is merely groping toward, but, has not touched, the real psyche. Its sincere but fumbling declarations or deductions are assumed to give scientific reinforcement to a body of quasi religious belief now common to intellects of the third to the thirtieth order, that mental contemplation or projection can govern and regulate the body and bodily functions; which would be important if, instead of glimpsing a truth, it were a truth. Still, it has, in one particular, done mankind a decent service. Whether by influence or through experience, we know that a candid state of mind once being induced, so that a fellow may reason reasonably with himself about himself, he can modify a habit, even though that habit be of the kind our forefather regarded as ineradicable.

Meat eating is a habit. It is readily subject to modifications. It can soon be driven out, should that expulsion seem desirable.

There is nothing to the contrary in the argument that we come of uncountable generations of carnivora—flesheaters. We retain the dog-teeth, the teeth of flesh-tearing animals, but, that does not mean that we are obliged to eat flesh, any more than our retention of a vestigial tail of the lower vertebræ means that we have to be monkeys, and govern ourselves as such. We do need the proteids that our merely animal (and nearer) ancestors extracted from flesh, yet, we are advanced far enough, both in physical organization and mental power, to know that those same aliments may be had from simpler and less wasteful foods, some of them vegetable, others animal products.

The lower planes of animal life are full of tragedy, necessary to the continuance of life itself. The creatures of the wild die murderous deaths, that others may live.

It is not so with us. We cling too closely to age-old ideas. When we come to think of it—or, rather, maybe, when we don't think of it—for no better reason than that

they are age-old. Mankind never advanced by hanging to useless customs or persisting in wrong directions or standing still. You can't make an ascent in a parachute nor a voyage in an anchored ship.

Benjamin Franklin was a most wise man, humane, sympathetic, and so far in advance of his day that we are only now catching up with him. This flesh-eating thing seemed wrong to him, not from the platform of animal-chemistry, but, as a matter of sentiment. It did not appeal to him as justifiable that man, the apex of life here, should eat his younger brethren or that any sentient being should die to furnish man with food. But, during the voyage that resulted in his discovery of the cause and nature of ocean currents, he saw the people of the deep devouring each other with avid freedom and he said to himself that, if they could do that, he could eat them, and, so, cut fish out of his abstentions. He might have had a further reason if he had looked a little farther. Fishes yield albumen and fat, both valuable; and fish-meat is almost nonfibrous, easily digested and highly assimilable.

Whatever sentimental considerations may affect the question of meat derived through the slaughter of land-animals, there is none when it comes to sea-foods, for, the whole life-business of a fish is, to eat and reproduce, and its death, when it is drawn from the water, is a rapture of intoxication. The fish is drunk with a sudden excess of oxygen. That is the reason it dies flapping. It is the greatest thing that ever happened in its life, if only it had sense enough to know it—which it hasn't. Eat your fish, therefore. It comes to your table by a route of exquisite happiness, and its flesh is good for you.

Eat your fish and beat out your butcher. There is unconscious merit in the lately instituted movement to boycott the butcher-shop in favor of the fish-market. Many of our food-fishes furnish as good meat as ever came out of pasture or sty, some of them better. Moreover, they respond with surprising readiness to variations in methods of cooking. I have had fish-dinners of many courses, that offered as much variety as course-dinners of the regular kind, where flesh and fowls were served. This fish-idea is worth looking into and following up. If fish were substituted for flesh, the cost of living, now so grievously

complained of, would go down, while the standard of health, I am sure, would go up. Eggs, milk, fish, with a variety of root-foods, garden-vegetables, and fruit, make an efficient, satisfying, and totally beneficial diet, with no morbid consequences.

The variety possible in such foods really is surprising. It offers a wider range of change and choice than any where meat is a staple. No two meals need be alike in any one week, and every one be good. I mean, taste good as well as be good for the body. And they will be cheaper by anywhere from a fourth to a half.

None of this is mere theory. It is practical advice, advice that is sanitary, in the better meaning of prevention. Disease evolves from a diet too largely made up of meats—"solid food," as meat is called, through a mistake of quantity or heaviness for solidity. Some diseases, like that old plague and outlaw, rheumatism, are actually promoted by animal flesh. It is most emphatically not so with such a course of feeding as that suggested here.

We need, broadly speaking, protein and hydrocarbons at the base of our nourishment. We need these natural chemical compounds.

We can get our animal proteids most abundantly, and with least wear upon our inner works from eggs, milk, cheese, butter, and fish. These are readily transmuted into muscle.

We can get our flesh-forming aliments, those that make fat or weight, the hydrocarbons, from beans, peas, butter, peanuts, nuts, olive-oil, cream, chocolate, sugar, honey, confections, bread and other cereal products, potatoes, bananas, figs, raisins, and many other vegetable products.

We can get phosphorus and mineral salts into our systems if we eat starchy foods, especially cereals—wheat, rye, oats, barley, corn, rice, etcetera.

There is no need for reducing the pleasures of the table in following this line of feeding. Here is a dietary course easily providable, thoroughly sound, as grateful as any, and considerably less expensive (if that means anything—what?) than any that includes meats.

Try it. You will like it. You will feel better. You will save money by it. You will have a clearer mind in a sounder body. You will be a more efficient unit in the population where you live.

[To be continued.]

Among the Books

"MEDICAL WAR MANUALS"

Lessons from the Enemy: How Germany Cares for Her War Disabled. By John R. McDill, M. D. Illustrated. Philadelphia: Lea & Febiger. 1918. Price \$1.50.

Laboratory Methods of the United States Army. Compiled by the Division of Infectious Diseases and Laboratories. Office of the Surgeon-General, War Department, Washington, D. C. Illustrated. Philadelphia: Lea & Febiger. 1918. Price \$1.50.

These are Nos. 5 and 6 of the "Medical War Manuals" authorized by the secretary of war and under the supervision of the surgeon-general and the Council of National Defense. War Manual No. 5, describing how Germany cares for her war disabled, is written on the basis of personal observation in Germany during 1916; these observations being greatly aided and facilitated by the authorities.

In analogy to the method of treating infected wounds evolved by Dakin and Carrel, a German surgeon, Dr. Wm. Mueller, has observed remarkable results in 327 cases of the severest types of wound infection from "a new method of treating severely infected wounds without the use of cotton." It is not quite clear just what Doctor McDill means when he describes the solution employed as being made by dissolving 1 kilogram of "kalk" (chloride of calcium)" in 8 liters of water. "Kalk" is calcium oxide, while "geloeschter kalk" is calcium hydroxide. Chloride of calcium would not liberate any chlorine, while chlorinated lime would; but, neither of these two are designated as "kalk." It is to be hoped that the author will settle this point in a new edition of his book. Probably, though, chlorinated lime is meant.

The manner in which this solution is employed is similar to that for Dakin's solution. Deep wounds are freely irrigated, under pressure, with the solution contained in an irrigator hung some 6 to 9 feet high, the finger assisting in seeking out all the recesses; tubes and gauze lightly packed are left in the wound depths, and over all

large ordinary sponges saturated with the solution are placed, and then covered with oil-silk held in place by a bandage. Every two hours, the sponges are squeezed, through the dressing, in order to drench the wound surfaces. The sponges are boiled daily.

War Manual No. 6 constitutes a handy guide for laboratory-methods as in use in the United States Army medical service. The methods cover, not only the examinations of pathological specimens, but, also the sanitary examination of milk, water, and other articles of food. These methods may be accepted as the best at present available.

Both these volumes, uniform with the others of the series, are well printed and illustrated, and attractive in appearance.

McCOMBE AND MENZIES: "MEDICAL SERVICE AT THE FRONT"

Medical Service at the Front. By Lieut-Col. John McCombe, C. A. M. C., and Capt. A. F. Menzies, M. C., C. A. M. A. Illustrated. Philadelphia: Lea & Febiger. 1918. Price \$1.25.

"The regimental medical officer is a person of protean pursuits. His interests reach from the cleanliness of the cook's hands to the care of wounded under fire. He legislates equally on water chlorination or trench-fever. He replies to queries ranging from 'How many men with itch reported at sick-parade?' to 'Considering the number of gas-shells that fell around trench 3 this morning, is it safe to relieve the company tonight?' . . . On analysis, his duties, like all medical activities, fall under either of two headings, the one preventive, the other curative."

This quotation from the text of this little volume indicates the scope of its subject-matter, which deals with the duties and activities of the medical officer at the front. It gives account of an amount of work accomplished by medical men that is astonishing in its diversity as well as in its volume, and it emphasizes the urgent neces-

sity for thorough and detailed training of medical officers before they are sent to the front. For, it is quite impossible for any civilian medical man to step into this work without previous special preparation; a further reason why medical men contemplating entering the medical service should do so at as early a period as at all possible.

Mechanically, the volume is uniform with the "Medical War Manuals" issued by the same publishers. Its study is full of interest and highly informative.

MOYNIHAN: "WAR SURGERY"

American Addresses on War Surgery. By Sir Berkeley Moynihan, C. B., Temporary Colonel, A. M. S., Consulting Surgeon, Northern Command. Philadelphia and London: The W. B. Saunders Company. Price \$1.75 net.

This little volume of 143 pages contains various papers read by the author in Chicago and elsewhere in the United States, during October and November, 1917. The titles are as follows: The Causes of the War. Gunshot wounds and their treatment. Wounds of the knee joint. On injuries to the peripheral nerves and their treatment. Gunshot wounds of the lungs and pleura. The dedication is, To G. W. Crile. Needless to say, American surgeons, and also physicians, are certain to be interested in these addresses by one of the foremost surgeons of the day, dealing as they do with the wonderful development that surgery is experiencing at the present time.

GOODNOW: "WAR NURSING"

War Nursing. A Textbook for the Auxiliary Nurse. By Minnie Goodnow, R. N., War Nurse in France. Illustrated. Philadelphia and London: The W. B. Saunders Company. 1918. Price \$1.50.

This is a complete textbook for the inexperienced auxiliary nurse showing her how to care for a ward of wounded men from arrival to dismissal. It introduces the reader to actual conditions, teaching how best to meet them. The dedication is, to all nurses, trained or untrained, of whatever country, who have served their nation in the great war. The author's acquaintance with war surgeons and nurses who have served in various parts of the war zone, together

with her own experience in France, with the Harvard Unit, with the auxiliary hospital at St. Valery-en-Caux, and with the American Red Cross Hospital of Paris, has given her a wide opportunity for knowing war conditions. Her instructions for the guidance of the untrained nurse, who is anxious to do her work well, are simple and concise while numerous good illustrations serve to make them even clearer. Altogether, this little book strikes us as a very serviceable one.

"FRAMINGHAM MONOGRAPH NO. 1"

Framingham Monograph No. 1. General Series. 1. The Program. Framingham Community Health and Tuberculosis Demonstration of the National Association for the Study and Prevention of Tuberculosis. Donald B. Armstrong, M. D., Executive Officer. Community Health Station, Framingham, Massachusetts. April, 1918.

This is publication No. 1 of the general series contemplated by The National Committee in charge of the Framingham Community Health and Tuberculosis Demonstration and deals largely with the program of the experiment. This little pamphlet makes excellent reading, and all physicians who are interested in the campaign against tuberculosis, as well as in the subject of health-work (and every physician should be so interested), are urged to communicate with Dr. Donald B. Armstrong at Framingham, Massachusetts, in order to secure copies of these publications. More regarding the undertaking has been said in an editorial article in this number, to which the Reviewer refers.

STITT: "TROPICAL DISEASES"

The Diagnostics and Treatment of Tropical Diseases. By E. R. Stitt, A. B., M. D. Second Edition, revised and enlarged. With 117 illustrations. Philadelphia: P. Blakiston's Sons & Co. 1917. Price \$2.00.

Doctor Stitt is one of the foremost American authorities on tropical diseases, a teacher of long experience, at the U. S. Naval Medical School, in Washington, D. C., and a favorite author on his particular lines of study. Since the peculiar characteristics of tropical diseases render recourse to laboratory examinations even more necessary for diagnosis than is the

case in the diseases commonly observed in temperate regions, the author's great familiarity with laboratory methods is of decided service in the diagnostic considerations. Stitt's manual of tropical diseases is well adapted for easy reference and contains all important information required for the study of these diseases.

CHEKHOV: "HUMOROUS TALES"

Nine Humorous Tales. By Anton Chekhov. Translated by Isaac Goldberg: : Henry Schnitkind. Boston: The Stratford Company. 1918. Price 25 cents.

This little book is one of the Stratford Universal Library in which the publishers have undertaken to reproduce the best literature of the world in small volumes selling at a low price. Each book contains an authoritative introduction that adds greatly to the interest of the contents. So far, stories have been published, in this series, by Gorki, Artzibashef, Tolstoi, de Maupassant, Balzac, and several other noted authors. The volumes are well printed and attractively bound, the entire undertaking being one for which the publishers deserve great credit.

It is of interest to physicians that the author of the nine humorous stories contained in the volume before us was a physician by training, although he was a writer by preference. His style, especially in his humorous tales, has been compared with that of O. Henry, and, certainly it is replete with human interest. The Reviewer has read these little tales with much enjoyment and hopes to be permitted to see the other volumes of the series also. The book can be cordially recommended for enjoyment during a leisure hour.

FOUST: "WITH GOD AND THE COLORS"

With God and The Colors: Prayers by a Mother for Her Soldier Boy. By Mrs. Leila Atwood Foust. Philadelphia: The Vir Publishing Company. 1918. Price 50 cents.

This little volume is another evidence of the trend becoming increasingly evident toward a deeper religious feeling. We do not know whether church-memberships are growing nor are we familiar with the results claimed by Billy Sunday and other evangelists, but, we do know that many

people are becoming deeply religious and are thus finding strength to bear the burdens and the trials that are consequences of our participation in the war.

Personally, the Reviewer does not like set and formal prayers. He does not even admit that prayer, as such, necessarily must be formulated in definite words and sentences. Yet, the appeals to God that are printed in this little book can not but touch one very closely, and we believe that many people who may read them in the prayer spirit will themselves derive benefit, even if they do not do so with the deliberate purpose of praying.

GEIGER: "BONE SURGERY"

Modern Operative Bone Surgery. With Special Reference to the Treatment of Fractures. By Charles George Geiger, M. D. With 120 illustrations. Philadelphia: The F. A. Davis Company. 1918. Price \$3.00

Unquestionably, one of the remarkable instances of progress in modern surgery is, the improved method of treating fractures by the open method which, while not original with Arbuthnot Lane, yet owes its present popularity largely to his efforts. The author of the volume before us ably vindicates the method by referring to the occurrence, for instance, of scoliosis, developing after a common fracture of the femur treated in the usual way, but in which slight shortening had followed union. A shortening of 3-4 to 1 inch, he says, will cause joint-strain resulting in the development of structural deformity. Here there is a strong argument in favor of his assertion that all fractures in which perfect union can not be secured by the closed method, should be treated by the open method and, if necessary by means of autogenous bone-grafts or inlays.

Doctor Geiger's book is devoted mainly to the subject of plastic bone surgery, including that of bone grafting which, he claims, should always be done with autogenous material in order to be safe and successful. In contrast, however, to his claim that no similar work on the subject has been published up to the present time, the Reviewer has before him Fred. H. Albee's beautiful work on "Bone-Graft Surgery" of which, of course, the author has knowledge. The discussions of this mod-

ern surgical procedure are of intense interest, not only for their importance in the rehabilitation of the injured, but also on account of its relation to questions of embryological, physiological and other processes upon which its success depends. Doctor Geiger speaks on the strength of much personal experience, and the technic outlined by him, if carefully followed, will ensure success. Therefore, his book is of service to orthopedic surgeons, and also to general surgeons who have in mind the possible distant results of faulty bone-union.

While mechanically the book is well printed and excellently illustrated, we regret occasional inaccuracies in the language which is an example of that linguistic abomination, viz., "medical English". We wonder why it is that American physicians do not take more trouble to express themselves in language that is in keeping with the dignity of their subjects. Surely, members of one of the learned professions should, at least, write correct English, and should arrange their arguments in logical sequence.

DAWSON: "CAUSATION OF SEX"

The Causation of Sex in Man: A New Theory of Sex, Based on Clinical Materials. Together with Chapters on Forecasting or Predicting the Sex of the Unborn Child and on the Determination or Production of Either Sex at Will. By E. Rumley Dawson, L. R. C. P., M. R. C. S. New York: Paul B. Hoeber. 1917. Price \$3.00.

The author of this little book of 219 pages of text arrives at the conclusion that a male fetus results from the fertilization of an ovum that came from the right ovary, while a female fetus results from the fertilization of an ovum coming from the left ovary. It is on this finding that he bases his theory of sex determination, in which he insists, above all, that the male progenitor has nothing whatever to do with the matter.

Although much clinical and statistical material is adduced by the author in support of his theory, somehow it fails to be convincing. Not that we can propose

something better in its place, but, the fact of the matter is, it is, by no means, certain that this problem can be solved at all. We are reminded of some recent findings by Doctor Apert, of the Andral Hospital, in Paris, who concluded that in women with adrenal hyperfunction male characteristics developed. Upon this fact, Robinson based certain experiments, in which he injected an active extract of suprarenal capsules (adrenalin) into female guinea-pigs, and these, after impregnation while undergoing this treatment, gave birth to 25 males out of 30 offspring. Conversely, injecting guinea-pigs with choline, which is looked upon as a physiological substance antagonistic to adrenalin, Robinson obtained 90 per cent of females.

These experiments would point, in contrast to the observations of Dawson, to a decided influence of the internal secretions upon the determination of sex. However, if all that has been written on the subject is examined critically, the conclusion is unavoidable that there is—fortunately, no doubt—no certain means of making sure of having a son or a daughter at will.

DE NORMANDIE: "OBSTETRICS"

Case-Histories in Obstetrics. Groups of Cases Illustrating the Fundamental Problems which Arise in Obstetrics. By Robert L. DeNormandie, A. B., M. D. Second edition. Boston: W. M. Leonard, 1917. Price \$4.00.

The Case-History Series, which originated a few years ago in Boston, embraces six treatises on as many special fields in medical practice, the subjects being taught by discussions of actual case-histories. The method is an excellent one and the six volumes have deservedly found much favor with physicians. The present volume, now in its second edition, presents histories of cases illustrating the various phases and problems of pregnancy, labor, and the lying-in period. The cases are well selected and the discussions are very instructive. These books should be studied by general practitioners.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6387.—“Phenolphthalein Test in Nephritis.” C. O. R., Washington, asks us to describe the phenolphthalein test for renal permeability and give directions how to prepare the solution.

Order from 300 to 500 mils of water to be taken one-half hour prior to making the test. Empty the bladder with a catheter, then inject, subcutaneously, in the upper arm, 6 milligrams of phenolsulphonephthalein, neutralized with sodium hydroxide, in 1 mil of water. (Socalled “sterules” of this strength are offered.) Allow the urine to drain through a catheter into a test-tube containing 1 drop of 25-percent sodium-hydroxide solution and note the time of the appearance of the first pink tinge. Remove the catheter and determine colorimetrically the amount of the chemical excreted in the first and second hours. Normally, the phenolphthalein appears in the urine in from five to eleven minutes, and in the first hour from 38 to 60 percent is voided, while in the second hour from 22 to 25 percent is excreted. Thus, the functioning power of the kidneys can be determined.

In severe acute nephritis, the renal permeability is markedly decreased; also in chronic interstitial nephritis. The delayed appearance and especially the diminished excretion in the 2-hour period are more accurate indications of functional derangement than is an estimation of total solids or nitrogen.

It is reported that the rate of excretion is of less importance than the relative amount excreted by each kidney and the fact whether the entire amount injected is excreted.

The urinary pigment may be overcome by precipitating with lead acetate. Some observers set three hours as the time; 60

percent of the chemical should be excreted in this period.

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QUERY 6388.—“Neurosis of Head of Obscure Origin.” P. D., Georgia, has a patient who has been the rounds without any doctor being able to alleviate or even to locate his trouble. All agree that it is a “neurosis,” but, that seems about as far as their diagnosis takes them. The patient is a man forty-three years of age. He has a good appetite, sleeps very well, evacuates the bowels every day. His urine and blood pressure are normal. His temperature always is normal, pulse is 60—just what both always have been. His urine and blood have been tested time and time again, but, with negative results. The patient says he never felt better in his life than he has the last year, except for the following symptoms, of which he complains:

“A little over a year ago, when he came in from driving his automobile, the back of his neck hurt him (at about the fifth cervical), then two or three months later, his head started to hurt—not a sharp pain nor was it a dire pain, but, he described it as if someone were holding a heavy weight against his head. It does not pain, but, feels full, as though a band of iron were about the head and the head were swelling within, the sensation sometimes amounting to a vertigo or, rather, a stunned feeling. No other part of the body is affected, it seems, but, the last three or four months it has been getting much worse. He says he now finds much trouble in writing. If he writes but one letter, he feels very much the effect; also he finds himself with his jaws very firmly closed, in fact, using much pressure. He states that that is just the feeling he has all the time—that his jaws

had been firmly fixed for a long time and that he could not relax.

"There was, for the first six months, no trouble on first arising in the morning. It would start about noon. The last three months it is always better when he first gets up, but, it starts in to be more troublesome as the day goes on and by night it becomes very troublesome. He seems to be getting worse every month. He has taken all kinds of medicine, including arsenic, iodides, tonics, intestinal antiseptics, reconstructants, but, so far nothing has touched the right spot. You see, it is no one part of the head, but, the whole head and neck feels as though it were bound up with bands of iron and his jaws were tired out from being set in one position, and that he can not relax."

The patient never smoked or drank and, so far as he knows, never had any disease of any kind.

Examination of a specimen of the 24-hour output of urine did not prove particularly informative. There was no evidence of intestinal fermentation, while elimination was practically normal. A small amount of sugar was found, but, certainly not sufficient to account for the symptoms enumerated, though it must not be forgotten that just such conditions have been observed in diabetes mellitus, and that this specimen of urine may not have been representative. Under the circumstances, it would be well to have an examination of the urine made every ten days or two weeks for the next month or two. This may be merely a cyclic glycosuria; on the other hand, it may be an oncoming diabetes mellitus.

A very careful test of the reflexes—both deep and superficial—should be made, and the electrical reactions be ascertained. Take special pains to exclude any possible subluxation of the vertebræ. Ascertain, also, wherever areas of anesthesia or hyperesthesia exist along the spine. The fact that the symptoms first appeared after the man came in from driving his automobile (such procedure frequently being accompanied by strain or prolonged assumption of unnatural position) is suggestive. Try general rotation of the head, extension, side-to-side movement. The jaw reflexes, in this case, are of special importance.

The present writer would look very carefully into the sexual life of this patient. He

would—temporarily, at least—employ massage, the high-frequency current, and suggestion. Alternate hot and cold spinal douching may prove helpful.

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 QUERY 6389.—"Precocious Coitus, Puzzling Pregnancy." W. E. A., Texas, desires the counsel of the editor and readers of CLINICAL MEDICINE in the case of a woman, twenty-two years old, who says that when she was eight years old she commenced to cohabit with a playmate and that they continued almost daily until she was fourteen years old. "At that time, she and the boy were separated and she has not seen him since. Up to that time, she had never menstruated, but about eight months after their separation the menses set in, and for the next eight years she was perfectly regular. Then she indulged again (this time in a legitimate way) and four days afterward her "period" came on again (as she thought), which was only two weeks after her last menstruation. However, on removing her napkin, she heard something fall on the floor, and found a perfectly developed fetus about an inch and a half or two inches long. She affirms that she had not had intercourse with any man from the time of separation from the schoolboy until the time mentioned above, that is, eight years, and that this fetus was passed within four days after the latest intercourse." An explanation of this peculiar occurrence is sought.

We have given the facts presented in your very interesting letter most careful consideration. If the fetus still is available, we suggest that you forward it to a competent pathologist for examination. At the same time, if it was expelled recently (and we gather from the chronological data that it must have been), a careful examination of the woman might prove informative.

We are, of course, compelled to arrive at two conclusions, namely: (1) that the woman's story is correct and she carried a lithopedion for eight years, expelling it after coitus with a vigorous adult male, or (2) that in a fit of absentmindedness she had connection in the regular way before the cohabitation "four days prior to delivery." We are, of course, unable to explain how a girl of fourteen could become pregnant eight months before the appearance of the menses. But, for that matter, we do not quite realize how a girl of eight could co-

habit, with any degree of thoroughness, with a boy of about the same age.

Upon general principles, we feel inclined to think that "all the truth has not been told." You say, "the fetus was fully developed, yet, but one inch and a half to two inches long." This would lead to the supposition that mummification had occurred. However, as you will readily comprehend, we must have more light before expressing an intelligent opinion. Try and examine your patient—but, do so in the presence of a reliable third party.

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 QUERY 6390.—"Urethral injections of Silver Iodide." W. E., Texas, asks: "Is silver iodide employed to any extent as an injection in gonorrhea? If so, what is the average strength of solution used?"

We believe that silver iodide is comparatively little used by modern genitourinary specialists. A suspension of the powder has been recommended as an injection in urethritis and, when used for such purpose, is generally prepared extemporaneously. Wilbert, in 1906, recommended this formula: 2.2 Grams of silver nitrate is dissolved in 50 mils of mucilage of acacia and 45 mils of water, and to this is added 2.2 Grams of potassium iodide, dissolved in 50 mils of water and thoroughly shaken. Such a suspension is procurable under the trade-name of silvocide.

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 QUERY 6391.—"Sclerosis of Corpora Cavernosa." W. J. H., Arkansas, describes the case of a hard working farmer, fifty-six years of age, suffering from progressive hardening of the corpora cavernosa, beginning three years ago. "The hardening began just behind the glans penis and has continued back toward the belly, until it now covers almost the entire organ. It does not trouble him much in the daytime; however, at night, the penis will become erect, and then rises almost straight up, and he has to get up frequently to urinate. It seems that the urethra stretches while the corpora do not, and that causes the organ to bend in an acute angle, thus preventing sexual intercourse." Our correspondent is desirous of knowing whether there is any remedy, besides amputation, for this condition.

We regret to say that no form of treatment is likely to benefit your patient, since his condition is consequent upon the de-

velopment of a fibrous mass in the erectile tissue of the corpora cavernosa. As a rule, this affection arises insidiously, without any apparent cause, and any portion of the cavernous body may be involved in the process.

The masses may be unilateral, bilateral or multiple. Usually there is a single growth, situated near the dorsum of the penis. As the mass develops, distortion and deformity of the organ occurs and it tends to curve toward the abdomen or to bend at right angle or in the direction of the affected side. Frequently the discomfort thus produced is the only symptom, although pain may be present in the incipient stage and generally is experienced in long-standing cases when turgescence occurs. Sooner or later organic impotence develops.

Fibrous sclerosis of the cavernous bodies, or corpus spongiosum, usually appears between the ages of forty-five and sixty, and the condition is not as rare as might be imagined.

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 QUERY 6392.—"Onychatrophia, Pruritus of Pregnancy." H. S. B., Pennsylvania, has under treatment a 10-year-old girl, who has toe-nails that are "soft and scaly." The big toe and three outer toes on both feet are affected. The nail on the second toe is normal. Her feet were frostbitten about three years ago and the trouble has existed since that time. The nails grow out and fall off.

2. "Woman is pregnant for the sixth time. As usual with her, between the fifth and sixth month, a pruritus started that bothers her so much she can not sleep. What can be done to relieve this condition?"

Atrophy of the nails (onychatrophia) often proves extremely rebellious to treatment, especially where, as in this instance, the condition results from some inflammatory condition of the matrix, following trauma or infection.

It is, of course, impossible under the scope of a communication of this kind to discuss at length the etiology and pathology of this atrophic condition. Briefly, however, it may be stated that either atrophy or hypertrophy may coexist with the various inflammatory and, especially scaly skin diseases. Other causes are: constitutional diseases, nervous disorders, traumatism,

vegetable parasites and others, while heredity is a demonstrable factor in some cases.

In this particular instance, we should conjecture that nutritive disturbance of the matrix is responsible for the imperfect nail formation. Under the circumstances, we should be inclined to give the child small doses of arsenic, with the nucleinated phosphates, say, two tablets of nucleinated phosphates three times daily between meals, and arsenous sulphide, gr. 1-64, after the two principal meals of the day, for ten days; then rest for three or four days, and repeat.

It might be an excellent idea to apply some mild disinfectant to the parts each night, then to envelope the end of the toe with a strip of gauze covered with borated vaseline.

If the child is thoroughly healthy in every way, and provided she can be kept out of mud and other undesirable dirt, it might be an excellent idea to let her run barefooted for several hours each day. Under any circumstances, be very sure that she wears only light, perfectly fitting shoes and, if there is any perspiration of the feet, to have them bathed two or three times daily, then dusting with some mild astringent powder. This, however, should not be applied to the nail-bearing area.

Before we can prescribe intelligently for the case of pruritus, we must have a clear idea of the condition of the body-chemistry. In these cases, however, thorough elimination—renal, dermal, and intestinal—usually is essential. As you are aware, the pruritus of pregnancy sometimes proves intractable; still, the present writer has, in several cases, managed to control it within a few days by applying a well-fitting abdominal supporter and giving very small doses of blue mass and soda every second or third night, and equally small quantities of sodium bromide twice daily for a week or so. Daily sponge-baths with epsom-salt solution are extremely useful. As a matter of course, the patient should be carefully dieted.

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 QUERY 6393.—“Nuclein in Tuberculosis.” D. H., Colorado, writes: “I am desirous of obtaining information regarding nuclein and its use in combating disease,—especially tuberculosis. I understand that nuclein had been used with great success abroad, but, have no idea to what extent it has been employed in this country. In

what respect does ‘protonuclein’ differ from nuclein (Abbott)?”

For information concerning nuclein, we refer you to various volumes of “Merck’s Annual Report,” 1914, and earlier, in which the current literature is excerpted. A very good article was published by W. Sanders, in *The Kentucky Medical Journal* for June 1, 1916, and reprinted in this journal in September, 1916, page 757. The files of this journal contain many references and original articles on nuclein.

Fox and Lynch, in *The American Journal of Medical Sciences* for April, 1917, page 571, have a paper on the effect of nuclein injection upon the leukocytes of dogs; while C. A. Neymann, in *The Bulletin of Johns Hopkins Hospital*, or April 1917, page 156, has one on changes in the blood-picture after nucleic-acid injections.

Dr. C. F. Read, in *The Medical Record* for January 15, 1916, page 342, deals with nuclein treatment of dementia præcox. B. D. Brooker, in *CLINICAL MEDICINE* for 1915, page 76, has one on nuclein in cancer. Nuclein in dementia præcox has been mentioned notably by Bayard Holmes.

As for the employment of nuclein in tuberculosis, there is a paper by Vaughan in the “Transactions of the Illinois State Medical Society,” 1894, page 97. Edgar P. Ward has an interesting paper on the intravenous use of nuclein in *The Medical Record* for March 26, 1910, page 528. Achard and Redford published an article on the use of nuclein-solution in surgery, in *The New York Medical Journal* for October 14, 1911, in which the most important literature is abstracted.

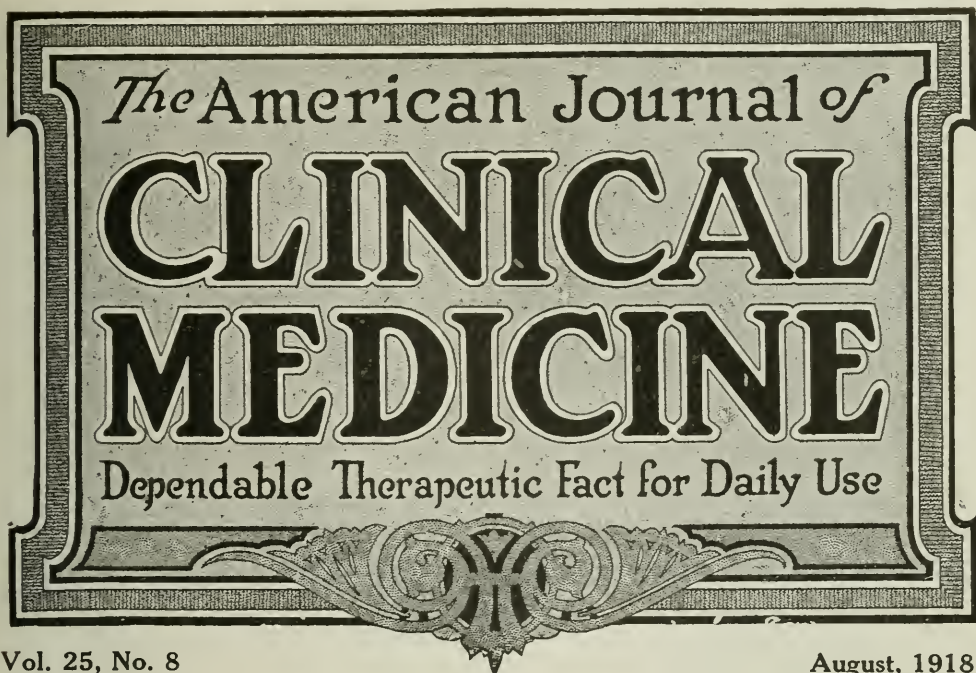
In tuberculosis, as in all other diseases, nuclein does not exert a specific, but, a general effect. By increasing the number of leukocytes and thus by making available in a greater degree all those protective substances that may be elaborated by these cells—according to the view of Metchnikoff and others—the organic resistance to infectious diseases, and also the power of cell repair, is enhanced, and in this manner the organism is enabled the better to overcome disease.

As to the difference between protonuclein and nuclein (Abbott), the principal one is that of origin, protonuclein being of animal origin, derived from the lymphoid and glandular structure, while nuclein (Abbott) is obtained from the germs of wheat, thus being a vegetable nuclein.



DR. GEORGE F. BUTLER

Whose practical articles, and whose cheerful and stimulating talks "Among Friends" always are of great help to many.



Vol. 25, No. 8

August, 1918

Speaking of Butler

DR. GEORGE F. BUTLER is a many-sided man. His ability as a diagnostician began to be known some twenty years ago and in this field, especially, he has of late been conceded a leading place. He has shown remarkable acuity in handling neurasthenic cases; as a consultant in treatment as well as in diagnosis, he is much sought; in preventive medicine, he has been and is aggressively active; and his conception of the human organism, as, most emphatically, including its psychology, although new in its bearings, is strictly within the range of ethics and has justified itself in practice.

Moreover, outside all these things, he is a writer of rare excellence, a fountain of pregnant epigram, a lecturer on many subjects, and a poet of fine vision and vivid style. The readers of this journal who have seen his contributions to these pages need be told little about him in that aspect.

All this is brought to mind just now by the announcement of Doctor Butler's appointment as medical director and physician in charge of the North Shore Health Resort of Winnetka, Illinois, on the shore of Lake

Michigan about twenty miles north of Chicago. For several years past, he has been at the head of Mudlavia, at Kramer, Indiana. His success there, though the range of treatment was narrow, by reason of the disorders amenable to the influence of the mud baths, was singularly high, quite high enough to command wide recognition. The administration of such a place involves the exercise of qualities not usually combined in a single person. In fact, it calls for a multiple personality; a physician, a man of the world, a scholar, a man of insight, a man whose manner, whose aura must attract and hold respect and friendship—for, he must meet all sorts and conditions, understanding all, or he must fail.

The North Shore Health Resort to which Doctor Butler has been called is one of the few really great institutions where success has been built upon sound ethical principles. Its reputation shines with the kindly luster of much good done to many people who had slipped into the shadows of unease and have been led back to their normality. It is a beautiful place, a noble group of buildings

standing among old trees, on high ground overlooking Lake Michigan.

It is described by one who has been there as having "not the slightest suggestion of a hospital, but, on the contrary, an atmosphere of cheery quiet, more like a home on a great estate, with its spacious rooms, its library, its places of recreation, its broad lawns, and the always changing moods of the lake that splashes on its beach."

It is gratifying to know that the medical department of this institution has passed into the charge of so well-tried, so peculiarly fitted a physician and executive. Not alone Doctor Butler, but, the entire medical profession as also those countless many who will come under his care in this new post, may be congratulated.

Doctor Butler informs us that he will enter upon his new duties on September first. Our cordial good wishes go with him and, we are certain, those of all readers of CLINICAL MEDICINE.

You may not be able to fight, but you can save and buy War Savings Stamps.

THE MEDICAL WORK OF THE WAR

A report of the chairman of the Committee on Medicine and Sanitation, appointed by the Advisory Commission of the National Council of Defense, has recently been published and bears witness to the tremendous amount of work that has been accomplished in the effort to aid in the conduct of the war, not only in preparing the active man-power, but, also, in taking care of the injured and in restoring them to usefulness.

The various committees and commissions engaged in this monumental work are numerous, and it may be difficult for the uninitiated to find their way through them; so, we will try to trace the work from the fountainhead through its various ramifications.

First of all, there is the Council of National Defense, consisting of the Secretaries of War, of the Navy, of the Interior, of Agriculture, of Commerce, and of Labor. This Council of National Defense has attached to it the Advisory Commission, one member of which has supervision of everything pertaining to medicine and surgery, including general sanitation. The chairman of the Committee of Medicine and Sanitation of the Advisory Commission

was authorized by the Council of National Defense to organize the General Medical Board, for the purpose of aiding in the enormous expansion of the various government bureaus and coordinating with their work the resources and talent of the civilian medical profession. The General Medical Board represents the civilian population in its relation to the four government administrative offices of the surgeons-general of the Army, the Navy, the Public-Health Service, and the Red Cross, and through it the organization, for war, of the medical profession is being carried out.

The Executive Committee of the General Medical Board is composed of Dr. Franklin Martin, as chairman, Surgeons-General Wm. C. Gorgas of the Army, Wm. C. Braisted of the Navy, Rupert Blue of the Public-Health Service, Dr. Wm. J. Mayo, Dr. Victor C. Vaughan, Dr. Wm. H. Welch, Dr. F. F. Simpson, and Rear Admiral Cary T. Grayson. In addition to these, many others of the leading physicians and surgeons of the country are appointed to the board.

The General Medical Board now consists of 77 members, 22 of whom are on active duty in Washington. Such medical problems as develop from the activities of its various committees are considered at the monthly meetings of the board and referred for action, if deemed advisable, to the executive committee. If the recommendations of a committee are approved by the executive committee, they are laid before the advisory commission, or the Council of National Defense, or both, by the chairman. If indorsed, the recommendations for final working-out are referred back to the General Medical Board or distributed in the way of information to those in authority in the bureaus concerned. The General Medical Board cooperates with all state and county communities and through them with the various sectional medical societies.

Upon looking through the report concerning the work accomplished by the General Medical Board through its various committees, one can not but be impressed with the many activities undertaken for the purpose of furthering and facilitating the work of the American nation in this war, and at the same time with the aim of rendering the unavoidable injuries as little permanent and as little harmful as possible.

It would lead us too far to enter into details concerning these activities, but, we believe that an enumeration of the special committees may arouse our readers' interest, inducing them to ask for a copy of this report, which was published on April 1 of this year.

The various committees of the general board are as follows: for children's welfare; for civilian cooperation in combating venereal disease; for dentistry; for editorial activity (mainly in publishing textbooks, epitomizing the surgical and medical experience acquired in the war—"Medical and Surgical War Manuals"); for hospitals; for hygiene and sanitation; for industrial medicine and surgery; for legislation; for medical advisory boards; for medical schools; for nursing; for research; for states activities; for surgery; for volunteer medical-service corps; for women physicians.

Some of the committees have associated with them various subcommittees, and here those attached to the committee on hygiene and sanitation are of a special interest. They are the subcommittees on alcohol and control of drug-addiction, on public health, nursing, statistics on tuberculosis and on venereal diseases.

Altogether, the work already accomplished, and to be undertaken by the General Medical Board, is immense in every way, and every physician, no matter where located, throughout the country should make it his privilege to offer his services freely and as fully as ever is possible to aid in this great service to the American people and to the world.

ARSENIC IN MALARIA

The success of the newer arsenic preparations in syphilis, trypanosomiasis, and other diseases induced by animal parasites naturally suggests the application of these remedies in malaria. And this is being done on an extensive scale in France, especially in combating the peculiarly obstinate Macedonian type of malaria. It seems that of these preparations neoarsenobenzol gives the best results when used either alone or in conjunction with quinine. However, while it seems not difficult to secure a clinical cure, by suppressing all manifestations of the disease, the examination of the blood tells a different story. In many cases, it has proved

simply impossible to rid the patient completely of the parasite.

Arsenobenzol is used in full doses. It is, by no means, harmless, and quite a number of cases have been reported in which discomforting symptoms arose from its use. To guard against these, Milian advises the addition of adrenalin. Untoward symptoms are much more frequent in malarial subjects than in syphilitics. Jaundice seems to be common, but, not very severe. Otherwise the injections are well tolerated, as is shown by the fact of the patients' general willingness to have them repeated. The reason for this is, the extraordinary improvement in the general condition, the adynamia and anemia being quickly relieved. Carnot recommends administering, during one month, 6 injections of neoarsenobenzol containing from 0.30 to 0.45 gram each.

Judging from the study of the medical periodicals of today, malaria has ceased to figure as an important affection in America; however, if we should have an outbreak of it, it would be well to consider the methods most successfully employed in France.

Serve abroad or serve at home. Buy War Savings Stamps.

THE NATIONAL SOCIETY OF KEEP-WEELS

Have you heard of the National Society of Keep-Weels? Sounds good, does it not? It evidently is in line with the prevailing trend toward preventive medicine.

It used to be said jokingly that the Chinese hire physicians to keep them well and that the emolument of these medicine-men ceased when and while their clients are ill. Whether this is true or not, the time will come when we shall recognize more generally than now that it is more economical to employ a physician to keep us well than to make us well after disease has declared itself.

The main object of the National Society of Keep-Weels, we are informed by a report of some remarks made by Mrs. Arthur MacDonald at a recent meeting in Washington, is, to interest and encourage the people of every community to organize and to invite their physicians to give practical talks on their specialties for the purpose of showing the people how to keep well rather than how to be treated after

they are sick. The attention of the moving spirits of the society seems primarily, to be directed to that fountain of innumerable ailments, the digestive apparatus. It is attempted to induce people not to chase fads and illusions in the way of food, but, to be contented with a well-balanced diet, the quality, variety, and quantity of which is regulated, not only by individual requirements, but, also by climatic and other conditions under which we live. Moderation in eating, as well as in everything else, is held out as a desideratum, and justly so.

All this is not proclaimed as anything new, but, it is brought to the attention of the people in a rather forceful manner and deserves to be taken up and taken to heart. As a class, physicians have been preaching moderation and correct eating and thinking as potent factors in the prevention of disease—until they became weary and discouraged because of the constant and continued infraction of the rules that have been designated as being calculated to maintain health. Yet, now, prevailing circumstances—political, social, economical—co-operate in causing people to stop and think. The increasingly great important function of the medical profession in these present times brings it about that more attention is paid to the advice of the physicians than was the case formerly, and it is well that we should fit ourselves to be guardians of the public health in every respect and in every way in which it is given to us to carry out our mission.

Every time you buy anything people work for you. Save labor and materials for the use of the Government.

THE HEALTH OF THE SOLDIER

One of the important factors requiring attention regarding the health of the soldier—not only when he is drafted into active service and while he serves in camp or in the trenches, but, also, after his return home and his reinstallation as a private citizen—is, tuberculosis. The tuberculosis-problem is one of the outstanding health-features of the day, owing to the strain and stress incidental to military service because of the deprivations and exposure to which soldiers are subjected; and it is feared that tuberculosis may increase among them. Furthermore, if we, as a people, should have to pay as high a price for whatever success may crown our ef-

forts in the war, as our allies, if it should become increasingly difficult to secure sufficient food of suitable quality for the civilian population—especially in nourishing our young people and children adequately, the probability is that there will be more active tuberculosis among certain portions of the population. This is a possible danger that must be guarded against with great care, and, so, very naturally, the National Tuberculosis Association has undertaken measures tending to delimit and, if possible, to prevent a possible spread of this disease.

One of the best methods in this direction has been found to bring the matter insistently to popular attention, and, with this end in view, the National Tuberculosis Association has prepared an exhibit of fifteen posters on the "health of the soldier," which is available for general distribution at a price of \$4.00 per set.

The exhibit is divided into three sections of five panels each. The first group of panels deals with contact-infection and shows how coughs, colds, measles, pneumonia, tuberculosis, and other diseases are spread by carelessness in spitting, coughing, and in contacts of various kind. The second section deals with the prevention of such diseases and shows how ordinary common sense and knowledge in covering the mouth in coughing, spitting or sneezing, combined with the use of individual utensils and periodic medical examinations, will safeguard against the spread of disease. The third section deals with fitness for fighting, shows in striking contrast that the best fighter is the fit fighter, and appeals to everyone to be fit as a patriotic duty.

These posters are printed in two colors on heavy lithographic paper, size 22 by 28 inches. The original drawings for the exhibit were made by James Daugherty, an artist of national reputation.

It goes without saying that home physicians are just as much interested in this problem as are medical officers in service. Indeed, if the present movement gains ground—and it is hoped that it will, namely, to secure a wider instruction of the people in health matters, through the agency of physicians—then the latter will truly become "doctors," that is to say, teachers, and will be in need of aids such as this selection of health-posters, by which they may demonstrate to their clients and to

those asking for instructions the points that they desire to bring out. Physicians, especially those in small towns and in country practice, would do well to secure these posters or to recommend their purchase by public libraries.

Hartley Withers, the editor of the *Economist*, of London, says: "Money spent in war time on things not needed is money given to the enemy."

TO THE DOCTORS' WIVES

Remember that the September number of *CLINICAL MEDICINE* will be a Woman's Number. It is devoted to you women, all the women of America, in appreciation of the splendid work you are doing at the present critical period of our national life. Most of the leading articles will be contributed by women—physicians, nurses, social workers, and others. In addition to this, however, we want miscellaneous articles, letters and other contributions, from the women at home, especially the wives of doctors in service. Tell us something about your home activities. We want to know how you are carrying on while the doctor is in the army; how you are doing your share in the war-work; and how you are keeping the home fires burning. Now, sit down and write us. Your letters should reach us not later than August 10.

GROUND GLASS IN FOOD

Every little while rumors are heard, charging the supporters of German propaganda and of German frightfulness with contaminating foodstuffs in various ways. Especially the charming pastime of mixing ground glass with food has been proclaimed to be a favorite means of rendering food intended for our and our Allies' armies injurious. The problem has been widely investigated by the division of laboratories and research of the New York State Department of Health. From *Health News* of May, we take the following:

Among the foods most frequently suspected, are spinach, tomatoes, and tomato sauce in tin cans, baker's bread, rolls, cooked meats, and flour.

Broken glass was not found in any canned vegetables. Sand was frequently present, indicating that care had not been taken to remove the soil from the material before placing it in the tin cans.

A number of samples of bread and rolls were sent to the laboratory, accompanied

by pieces of glass said to have been found in the food. In a systematic attempt to introduce ground glass into baked foods, it would, undoubtedly, be distributed through the mass. However, in no case was any glass found when the outside of the loaf or roll was cut off and the main mass of material examined.

At present, the public is keenly alive to this question of ground glass in foods. The finding of a piece of glass in food would, ordinarily, be attributed to accident, now, however, it frequently creates unwarranted suspicion of malicious intent. Many people also forget that vegetables originally come from the soil, and very often retain some of it if not properly prepared.

The results of the laboratory examinations thus far indicate that caution should be tempered with common sense and that at the present time there seems to be no justification for serious alarm.

EDUCATION OF THE NEGRO

Two papers of unusual importance have come to our table, dealing with the education of the Negro and the Negro question in general. One of these is the paper by Doctor Wilson, delivered before the American Academy of Medicine. The other is a circular emanating from the Chamber of Commerce of the United States of America.

CLINICAL MEDICINE has strongly opposed in the past the tendency to ignore the differences between the Negro and the white man and to extend undue sympathy to the former, simply because he is a Negro. But, we can not help feeling that the author of the paper mentioned has gone to the other extreme. His criticism of the Negro is very largely based upon the fact that the Negro is not a white man. Hence, it is criticism rather than scientific discussion which he gives us. Throughout his paper, he fails to credit the black man with his most notable good qualities—and, he has plenty of them.

In his discussion of the question of education and its influence upon the criminality of the Negro, we find not one word of criticism of the methods of education in vogue; and, yet, it seems an obvious conclusion when education has failed to lessen the criminality and to improve the

health of the Negro, that his education has not been the one suited to his nature and conditions.

The first considerations should be: What kind of education does the black man need and what is the best method of securing it? The radical mistake has been in the attempt to base this education upon literary instead of industrial standards; but, an error quite as serious has been, a failure to realize that the Negro never will be suited to a life of isolation. He is essentially gregarious, and, while he needs the encouragement, advice and example of the white man he needs still more those things coming from the best developed members of his own race.

Then, again, take the expression of ours just used: "the example and advice of the white man." After generations of slavery, during which the Negro was taught to look up to the white man as a superior being, he was suddenly deprived of all support from this source, and without the slightest preparation compelled to assume the duties of citizenship. No greater crime has ever been perpetrated against the Negro—a far more serious one than that of taking him from his native home in Africa and transplanting him to this country. When we consider what has been the true nature of the "advice and example" given to the Negro by a large proportion of the white population, we ought to be glad to have the matter passed over in silence.

Labor and material are essential to victory; use both sparingly.

EGG-ALBUMIN AS A FOOD FOR THE SICK

For years, we have employed the raw white of egg as a diet in many cases of illness, especially in typhoid fever. Our reasons were two: first, the observations of Beaumont, which showed the quickest absorption of this out of all the foods he tested; secondly, the consideration that in the egg the albumin is absorbed into the tissues of the growing chick without having to pass through any digestive process. This latter fact especially commended itself to us because of the lacteal system being affected in typhoid fever.

Now, however, comes a French colleague, Doctor Linossier, who tells us (*Monde Méd.*, April) that we were mistaken; that, while raw egg-albumin quickly

disappears from the stomach, it actually is not utilized as food. Even more, he asserts that it contains a toxic substance, probably a toxalbumin, and which is destroyed by the heat in cooking. Besides, he denies that cooked albumin is less easily digested than raw. Linossier pronounces eggs especially injurious in hepatic maladies, as well as in lithiasis. Unfortunately, there does not seem any way of deciding such a question excepting the very unsatisfactory and misleading one of clinical observation.

THE FRAMINGHAM COMMUNITY HEALTH DEMONSTRATION

The Framingham Community Health and Tuberculosis Demonstration, of which mention was made editorially in this journal (July, p. 492), recently published an account of a sickness census that was undertaken for several reasons; namely:

As a measure for obtaining a percentage figure for admitted illness, for possible comparison with other sickness surveys.

As an instrument for acquiring a more thorough general knowledge of the community selected for the demonstration.

As a basis for comparing sickness census with subsequent medical-examination findings.

As a necessary step, if sickness census figures, at the end of the demonstration, are to be compared with similar findings at the beginning.

As a measure of importance, in part at least, for the experiment with, and development of, machinery for the detection and control of disease, particularly tuberculosis.

This census, covering, as was originally planned, typical sections of the community and groups in the population, enumerated 6,582 people, a sufficient number to justify reasoning to the Framingham community at large regarding the probable prevalence of admitted illness. Among these people, 38 were recorded as being suspiciously or positively tuberculous.

The sickness rate for the entire group covered in the census was 407 cases, or approximately 6 percent, which is a higher rate than ever has been recorded elsewhere; indicating that a large amount of illness was recorded, particularly a higher percentage of minor conditions, as a result of more intensive publicity preceding

the census and the more liberal definition of sickness adopted for the study. Of the 407 sick people, a little over one half, or 220, were unable to work. 315 employed physicians, 9 were cared for in the hospital and 6 in the dispensary, so that 330, or 81 percent, of the total received medical attention.

These are only a few of the points brought out in this very interesting sickness census as they are published in the Framingham Monograph No. 2, lately issued.

George W. Wickersham, former Attorney General of the United States, says: "Business as usual means waste as usual."

SEAMEN'S INSURANCE

From a statement issued by the Bureau of Publicity, U. S. Treasury Department, we are informed that more than 69,000 masters, officers and seamen on American merchant vessels traversing the war zones have been insured by the United States Government. This insurance totals more than \$115,000,000. Claims under the insurance are so far a little more than \$180,000.

This insurance as to vessels traversing the war zone is compulsory, though it is not required that the insurance be taken through the Bureau of War-Risk Insurance. However, virtually the entire personnel of the merchant marine is insured by the bureau, the Government rate being only 25 cents for each \$100 of insurance.

Since the American fleet has been patrolling the seas the rate has been reduced from 50 cents for each \$100 of insurance.

If the owner of a vessel traversing the war zone fails to insure the masters, officers, and crew, the Secretary of the Treasury may take out insurance for them with the bureau and, further, fine the owner not more than \$1,000.

The insurance affords protection for disability or death resulting from war perils and provides for compensation during detention following capture. One American captain's wife has been receiving a monthly check for \$337.50 since her husband was captured by the Germans.

A man may now enlist in the merchant-marine service with full assurance that in case of death, disability, or detention in prison his dependents and loved ones will be provided for.

Similar plans of insurance are in operation for the soldiers and sailors in army

and navy. If Uncle Sam calls upon his nephews to serve him, he, in return, protects them against loss to the fullest extent, irrespective of the fact that the country may justly expect the active support of all men and women, for its own protection and for that of the world.

THE HISTORY OF THE WAR

Enterprising publishers all over the country are announcing works, more or less pretentious, that have been published, are being published or are planned and purpose to relate the history of the world war.

The present writer always has been slightly skeptical concerning the possibility of such an undertaking at the present time, when history is in the making—and a more stirring, seething and painful history never was lived through; for, really, it is futile to try to depict the happenings with anything like the necessary degree of freedom from bias that is essential for a just delineation and correlation of facts.

For this reason, a recent communication by Doctor Roshem to *Paris Médical* of June 8 is of interest. This communication was inspired by a book entitled "False News of the Great War" and is of sufficient importance to be excerpted freely. Doctor Roshem says:

"While certain authors, even members of the French Academy, pretend, at the present time, to write histories of the war, it must be realized that such an undertaking is an impossibility. Complete documents are not available and, even if the author were acquainted with all the facts, one would have to be careful in disclosing them. We need not speak of the changes in the viewpoint that time will bring. The busy scribblers ignore that. Time, however, will not pardon them for this offense and their works will not live. Impartiality, without which it is not possible to be a good historian, is far from being a virtue during a war like the present one. In times of peace, of course, one may venture to voice disagreeable truths about one's own country, while in times of war this is dangerous and may be criminal."

"What has been called 'The Little History' can not escape the same strict uses. However, when I received the book of Dr. Lucien Graux, entitled "False News of the

Great War," I opened it with much curiosity as to how our colleague, who is a facile writer and versed in the composition of interesting books, had been able to avoid the rocks.

"As a matter of fact, his work is in the nature of a preface to an announced larger study, which it precedes. This first volume is composed of general considerations and psychological analyses that are penetrating and amusing, and written with a lively pen; also there are retrospective historical sketches upon the false news of the revolution, of the Empire, of the war of '70-71, and of the Commune.

It may be permitted to cite just one passage, which shows the spirit with which Lucien Graux has succeeded in picking out typical 'canards,' such as illustrate in a few lines the prevailing preoccupation of the moment. He says:

"In 1870, when Paris had been surrounded, and hunger began to gnaw at the vitals, the following appeared in a little publication by Villemessant, entitled 'Le Siège de Paris':

"One speaks of a convoy of fifteen hundred cattle. By a frequent ruse, these groups of cattle—which always have a boss-animal which they follow with a docility and confidence that might well be imitated by humans—have succeeded in entering through another gate than that leading to the encampments. The others have followed and the firing of the Prussian foreposts, who saw themselves robbed of their prey, has only succeeded in accelerating the course of the deserters that have finally entered Paris, where their patriotism has guided them.' Doctor Graux continues:

"What was done to these patriotic cattle? I suppose they had the good taste to commit suicide by throwing themselves against some spit, and that the calves arrived with their noses already decorated with parsley freshly picked. The imagination of the news-gatherers has nothing to equal it, except for the naive attitude of their hearers."

This possibly is a rather forced example of "war news," yet, it is an example.

It is to be noted that those war stories and war books that have already been published, even those that lay claim to the ambitious name of war history, can not present anything but isolated occurrences. Were it possible to delineate the history in

the making, let us say, of the war as it is conducted by the Allies, that still would, necessarily, be incomplete; and, above all, it would be dictated by the excitement of the moment and influenced by the anger and indignation at operations, raids, invasions, and atrocities of the enemy. Also, the author would be handicapped by the fear of the censor and by consideration of expediency. Much is now taboo that may be freely discussed in normal times.

Of course, in so far as the tactics of the central powers are in contravention of all recognized rules of "civilized" warfare (the irony of calling war civilized, at any time!), their procedures always must incite indignation and just wrath; yet, in time to come, the personal feeling will have yielded to a more dispassionate, matter-of-fact reasoning, and it will be possible to depict the happenings of the present time more correctly when one's blood no longer boils, when time shall have afforded solace for injuries suffered and for miseries witnessed.

One need not fear that, when that time of dispassionate, matter-of-fact historical recording has come, the methods of Germanic diplomacy and warfare will be dealt with too leniently. The central powers have forever placed themselves beyond the pale of decent governments and their people will require decades, if not centuries, of repentance, literally in sackcloth and ashes, before they can be received again in the community of civilized nations.

But, the point that we wish to make: War histories written at the present can be neither fair nor just, nor can they be true. They can be war histories, but, not war history.

Become a stockholder in the United States—buy War Savings Stamps.

STUDY OF THE CLASSICS PRELIMINARY TO THE MEDICAL COURSE

The subject of medical education is one that is ever present and concerning which only one thing is unanimous, this being that the best should be offered to medical students in order to make them into efficient medical practitioners. Just at present, we are concerned less with the medical curriculum itself as, rather, with the requirements upon which students are admitted to medical college. In recent years, all leading medical schools of the country demand

from the applicants for matriculation a Bachelor degree or evidence of not less than two years of college work. It has often been asserted that a college education is not necessary preparatory to the medical course and especially the necessity of a classical course has been denied and opposed sometimes almost vindictively as involving a needless waste of time. It is especially the study of the classics that has been deprecated many times, the demand being insistent for more "practical" preparation in young men and women for their medical studies.

It is, therefore, with particular interest that we have taken note of an address delivered by Prof. Lewellys F. Barker, of Johns Hopkins, at a conference on medical education at the eleventh annual meeting of the Southern Medical Association (*South. Med. Jour.*, May, 1918). Doctor Barker points out, what can not be disputed by anybody, that men and women contemplating the study of medicine should first receive a liberal education. To be able to understand, to convince and to persuade one's fellow man, as it is the function of physicians continuously to try to do, something more than endowment by nature is necessary: the intellect must be disciplined, the emotions must be schooled, the sympathies and imaginative powers must be developed, and what we mean by "will" must be educated.

While, then, there can be no difference of opinion concerning the necessity of a liberal education before entering upon the study of medicine, it is a question just what is meant by liberal education. In Doctor Barker's opinion, this involves, on the one hand, training in the physical sciences of physics, chemistry, and biology, as well as in mathematics, upon which the physical sciences are founded; then, on the other hand, a training in the humanities—history, languages, literature, and philosophy. The difficulty is only as to the amount of time and effort that should be devoted to the various departments of general knowledge that is to be attained in getting a liberal education. Especially the study of languages often is opposed as needless.

Doctor Barker, however, presents as a thesis, first, that students entering medicine should be liberally educated; second, that a liberal education includes an education

in the physical sciences and in the humanities; and, third, that an education in the classics—the Latin and Greek languages and literatures—is an essential part of education in the humanities.

The last opinion expressed by Doctor Barker in his thesis is based upon his own experience through which he was obliged to acquire painfully the necessary knowledge of Latin and Greek which had been neglected in his earlier education; and, owing to this experience, he feels all the more keenly the great advantage that a thorough grounding in these two fundamental languages would have been to him in his later studies. For exact, concise, and logical expression, Latin stands supreme, while even a little knowledge of Latin and Greek is of the greatest help, not alone in understanding the terminology of sciences, but, also, in understanding the vocabulary of our ordinary life. Since language is necessary for thought as well as for communication of thought, studies that widen and deepen our knowledge of language are worthy of prosecution by the prospective medical student.

Dean Vaughan says, quite correctly, that the habit of class observation, of attention to detail, of looking for fine distinctions and shades of difference, and the alertness of mind awakened in an individual by these habits prove of inestimable service both in his experimental work in the laboratory and at the bedside of his patient when he becomes a scientific medical man. Carelessness and superficiality are incompatible with the thorough study of Latin and Greek.

It is not merely for its linguistic training that the study of Latin and Greek is advised, but, also, for the reason that it makes possible the study and the enjoyment of the classical writers. It is to Greece that we owe our principal literary forms, our fundamental ideas in science and in philosophy, and our standards for the recognition and enjoyment of beauty. To Rome, we are largely indebted for our courts of law, our system of government, our institutions, our ideals of the family and the national life. The intellect of the Greeks and the character of the Romans are a priceless heritage. While the literary inheritance that has come down to us from both is accessible in translation, this never can, as Doctor Barker points out,

adequately reproduce the spirit and essence of the originals. For one fully to enjoy an ancient author, he must read, not in English equivalents, but, in the author's own words.

Doctor Barker summarizes his remarks by saying that the mental training that the study of the classics offers, the cultural value of the great literatures of Greece and Rome, and the pleasure derivable from the reading of the ancient authors, especially the poets, in the original, make the inclusion of Latin and Greek in any plan of education that may be called truly liberal inevitable. The classical authors still possess their potency.

In the discussion of this interesting communication, an observation was brought out that has been made by many teachers, namely, that the student who has had a classical training is more teachable than the student who has not had it. In the study of the classics, more mental exertion is required than in that of the modern writers; and what we require in education is mental discipline, the best studies being those that will give the maximum of disciplinary training. It was also fittingly shown that, for the study of medicine, the better the training and the larger the experience, the better was the teacher, other things being equal. The more the previous educational training, even to the A. B. degree, the better the student will be and the more he will get out of his medical education, and the better physician he will be as a result.

It undoubtedly is true that those students—and others, for that matter—who have not had the advantage of severe classical training, including the study of Latin, at least, are at a disadvantage as compared with their peers who have enjoyed that privilege. In his teaching experience in modern languages, the present writer always found it far more difficult to teach those young people who were without any knowledge of Latin, while those who had studied this language could readily and without difficulty be made to see the intricacies and necessary rules in grammar. Indeed, he is inclined to assert that it virtually is impossible for most English-speaking persons to acquire a grammatical conscience, to feel and understand finer grammatical distinctions unless there is a

basic knowledge of Latin upon which the grammatical sense can be developed.

Surely, it may be expected of physicians, as members of an academical profession, that they at least should speak and write English correctly. Yet, it is notorious that medical English bristles with grammatical and syntactical atrocities that would shame a school-boy in his first year of Latin in any of the European schools. A man may be a man for all that, yet, the container always should be worthy of the contents, and an address or an article or a book should, it may be demanded with justice, be clothed in correct, well-chosen, and concise language. It is for this reason that we are convinced that medical students should have the ability, or should be made to acquire it, of correct expression of thought.

A man might as well talk of going on his honeymoon alone as hope to accomplish any good by worrying.

INCREASE IN INDUSTRIAL ACCIDENT MORTALITY

The attention paid for a number of years to the safety and welfare of industrial workers generally has resulted in a lower accident rate than has formerly prevailed, thanks, particularly, to many ingenious contrivances invented and utilized for the purpose of diminishing the possibility of harm to the workers in hazardous occupations.

It is not without a degree of apprehension that we note, from the result of mortality statistics covering the experience, during the year 1916, of the Metropolitan Life Insurance Company, concerning 9 million white lives insured in its industrial department, that the accident rate for the working classes of the United States increased 5 points per 100,000 men living, over the mortality for 1915 (*Monthly Bulletin* of the Department of Public Health and Charities of the City of Philadelphia for September, 1917).

This condition may be the result of the increased activity in industry and to the speed-up processes incident to war conditions. However, mortality from automobile accidents and injuries showed by far the largest increase in the rate for any of the specified causes of accidental mortality. This must be attributed in part to the speed-mania, characteristic of Americans as a nation, and also to recklessness.

Leading Articles

Dermatological Notes—II.

Etiology of Eczema

By A. V. RAVOGLI, M. D., Cincinnati, Ohio

THE causes of eczema must be found in a local irritation of the skin and in a peculiar liability of the general system. The local causes which act as irritants on the skin are perceptible and usually known, while the internal causes ascribed are, in general, theoretical and more suspected than actually known. External causes are, mostly, all irritant substances capable of producing dermatitis, such as mercurials, formaldehyde and cement. The views of Hebra always were in favor of external irritation as a factor in eczema, he refusing entirely the theory of arthritism of Bazin, that of herpetism of Hardy and that of the eczematous dispositions of Devergie.

However, Hebra never has denied the influence of the state of the general system on the reactivity of the skin to the injurious action of the external irritants. He laid a great deal of stress on the condition of the blood, when he explained the production of eczema from irritating causes which for many years had never produced any trouble on the skin. Thus, a washerwoman for twenty years has used soap and lye, without the skin being affected in any way, when all at once she gets eczema of the fingers, of the hands, of the arms from the same soap and from the lye. He said: "Now let us investigate the general condition of that woman. She has lost weight, she is pale, she no longer has regular menstruation, her appetite no longer is what it was; in one word, her system is run down, her skin is not nourished as it was, and more, the same soap and the same lye, innocuous for so

many years, have become irritant and a cause of the eczema."

We must not forget that, when finding difficulty in explaining the recurrence of eczema, either from the external irritants or from the internal humoral crisis, authors have turned their attention to the nervous system, and Bulkley has been one of the greatest supporters of the theory of nervous eczema. Broca admitted also, for certain kinds of eczema, the influence of a shock or of moral troubles as causative of the eruption. This was, after a while, accepted by Kaposi as reflex eczema. We know that angioneurotic conditions are the direct cause of urticaria, of erythema, of some kinds of edema, which may prepare the skin for the eczema. Either with or without this preparation of the skin, an acute eczema often makes its appearance in a short time after a nervous shock, after a fit of rage or bad news, and an inflammatory condition of the skin. We would question, however, that the nervous system has a direct influence on the skin, rather than a disturbance of the digestion often causing fermentative toxic elements which, absorbed and carried into the circulation, affect the vasomotor center. The vasomotor instability would be a cause in preparing the skin for the onset of eczema. It causes an itching sensation, which impels the patient to rub, to scratch, thus making the skin vulnerable and easily accessible to the action of the pus-germs. On several occasions we have called attention to vesicular eruptions, symmetrical of the palms, of the soles, which are going under the name of

eczema, and which really are the result of peripheral neuritis. Herpes labialis, as also herpes progenitalis suddenly arises from an inflammatory condition of the nervous ramifications and this, by accidental pyogenic infection, may become the focus of a stubborn eczema.

Eczema Often a Secondary Effect

Eczema, in many instances, is only a secondary affection, it being found to accompany some cases of psoriasis, prurigo, scabies and trichophyties. It seems that in all pruriginous affections eczema is produced by the scratching with the finger nails. The idea of comparing eczema with the exanthematous eruptions is not tenable, when we consider the onset of the exanthema as affecting simultaneously the whole body, while eczema spreads gradually from one region to another, so to say, by continuity or by contiguity.

Dietetic errors often are credited with the production of eczema. In fact, we find many physicians who give to patients suffering from eczema a printed list of what they may eat and what they must avoid. In some cases, we have found that almost everything was to be avoided, so that very little remained to be chosen by the patient for his nourishment. We never shall forget one patient who, when he asked for the diet-list, was told to eat good substantial food and not to bother himself about so much selection in the different articles. Learning this, he rejoiced and thanked God for this good news. The selection of his foods in hotels was a great trouble and such patients disliked to sit at the dinner-table, on account of so many restrictions.

The influence of the food in the production of eczema rests either upon the quantity and quality of the material or upon a bad digestion, thus causing fermentation, from faulty assimilation, or upon lack of excretion of the residuals of the digestion. From this viewpoint, it is clear that we may have eczema from alimentary elements as well as from autotoxic substances arising from a faulty digestion. The abuse of alcoholics must be taken into consideration, especially as eczema of the legs and feet in old alcoholics has some connection with the abuse of liquors. Gastrointestinal catarrh, dyspepsia, a too rich or a too poor diet often is found to be a cause of eczema,

especially in children. To diet has been attributed great importance in the secondary elements resulting from a lack of assimilation, such as uric acid, xanthin, kreatin, tyrosin, and so forth. The presence of these noxious substances in the blood, because not entirely burned, and brought to the skin, would irritate and act as causative of eczema. This irritative action, however, is more a speculative one, because thus far it has not been directly proved, and it seems that it is more likely to produce erythema, urticaria, and probably eczema as a result of the other affections.

Effect of Treatment

It must be pointed out that eczema, when produced by these internal conditions, is not cured by remedies directed against arthritis, but must be treated with external applications. The remedies for the internal ailments would be ordered only for relieving the condition of internal disturbance; but, the skin should be helped locally.

Nobody can deny that the regulation of the diet, the removing of alcoholic beverages, the regulation of the functions of the bowels, massage, fresh air, exercise and changing the method of living of the patient have a great influence upon the health and, no doubt, will help to obtain recovery from the eczema. Some change in living, however, will also help in the treatment of acne, chronic urticaria; for, very likely the irregularity of diet, if it was not the direct cause of eczema, was at least a drawback in the cure.

Alimentary substances can not be considered as a direct cause in the production of eczema, but, only as an indirect cause, in diminishing the resistance of the organism to the pathogenic action of the micro-organisms. Indeed, as Unna remarked, by the regulation of diet, eczema is improved in the same way as urticaria and acne also are somewhat improved. After eating indigestible or questionable food, through the reflex nerves of the digestive apparatus, the itching sensation must increase. Moreover, the toxic elements produced by a faulty digestion and carried to the skin will, certainly, aggravate the inflammatory process, increase its severity, and start another relapse. A direct irritation on the skin is the principal cause of the eczema, as we see in those handling cement, lye, some photo-

graphic developers (e. g. mitol), but, the resulting affection of the skin in this instance is a dermatitis, and not an eczema. However, the dermatitis soon will be changed into eczema, when the pus-cocci invade the irritated, macerated, and abraded epidermis. In our experience, we have seen quite often eczema developed around pus-foci, and in the same eczematous patches develop pustules and furuncles, resulting from the same microorganisms. That in eczema there exists some slight contagiousity can not be denied, and we have seen eczema occur on the breast of the mother when the nursing infant had eczema of the face or of the scalp.

It is necessary to mention that often eczema starts with herpes tonsurans, or trichophyton tonsurans is at the bottom, and the so often mentioned symmetrical lesion is nothing else than the infection by contact from one region to another. In cases of the old eczema marginatum of the fossa crurogenitalis and the internal surface of the thighs, it occurs on both sides, because both sides are in close contact. In the palms and in the fingers, eczema often is the result of trichophytic infection, which is so easily transmitted by towels, straps, et cetera. Ormsby already had occasion to call the attention of dermatologists to the presence of the trichophyton in those stubborn cases usually treated as squamous eczema.

That the finger-nails, by scratching, are transferring microorganisms from infected parts of the skin to other parts, is known to the patients themselves. They know that if they can abstain from scratching, they are better off, and the eczema remains limited. Every dermatologist has made his own observations in the reacutezation or in the relapses of eczema, which starts usually around a rhagades or a fold of the skin, where some pus or some secretion could remain undisturbed and afford a chance to the staphylococci to develop and prepare another relapse.

Eczema often is an occupational disease. We already have mentioned that those working with hands in cement often are affected with eczema, which is of the relapsing type. Cooks and laundresses often are troubled by eczema from the steam arising while at work. Barkeepers and dishwashers, who have their hands in water

most of the time, are liable to be affected with eczema. Undertakers, embalmers and medical students handling corpses kept in formaldehyde are subject to dermatitides, which are soon changed into eczema. Dentists handling metallic mercury in making amalgams have often come under our care for stubborn eczema of the palms and of the tips of the fingers. Eczema of the plantar surface of the metatarsophalangeal region and of the interdigital spaces is often the result of excessive walking, especially in those afflicted with hyperidrosis. The epidermis, macerated by the perspiration, gets hard and inelastic, easily cracks, and these cracks constitute nests for the staphylococci that produce eczema.

Contagiousness and Predisposing Causes

In our view with regard to the course of eczema, its suspected hereditary transmission, and the relapses, nothing stands against the conception of the cause of eczema as a local staphylococcus infection. The dietetic errors, the vasomotor disturbances, the rundown condition of the patient are of great importance in the reproduction of eczema only as occasional causes favoring the reproduction and the virulence of the microorganisms. Unna described three different forms of cocci which he found in the epidermis in the scales, and in the crusts of eczematous patches, to which he would attribute the production of parakeratosis, spongiosis, and akantosis. In short, the eczematous surface has been found abundantly covered with cocci, and the cocci, scraped from the eczema and inoculated in animals, have produced vesicular eruptions of an eczematous nature. This explains the slight contagiousity, which has been observed in some cases of eczema; these cocci, when placed on another skin in favorable circumstances, may reproduce the disease.

The quick and rapid spread of eczema has been somewhat against the microbial theory, and many have, rather, upheld the opinion of its being a vasomotor disturbance. We see dermatitides that in a short time are changed into eczema. Often the physician is the cause of the eczema, more often the patient himself, by applying on the inflamed skin greasy remedies, which cause irritation and the spreading of the eczema. In many cases, the stubbornness of the eczema can be attri-

buted to the poor attention to the treatment given by the patient, to some inopportune applications, and to inexpedient advice given the patient.

The maceration of the epidermis by keeping the skin in water or in chemicals or in irritating substances is an important cause in the production of eczema. The same can be said with reference to secretions, normal or abnormal, remaining on the skin, as, for instance, urine, vaginal secretion, diarrhea, perspiration, intertrigo, et cetera. When the epidermis is macerated, it offers the best culture-medium for parasites. Rhagades resulting from the maceration of the epidermis are the cause of the chronicity and of the relapses of eczema. As long as the rhagades have not healed up, eczema will recur, as the rhagades are nests of microorganisms from whence they start reproducing the eczema.

In many cases, eczema is produced from scratching, by inoculating the pus-germs in cases of other affections. Eczema often accompanies scabies, senile pruritus, and lichen planus. Eczema of the lower extremities often is found together with varicosities and varicose ulcers of the legs.

In children, we must admit a certain disposition to eczema, from their skin disposed to seborrhea. Under the seborrheic masses on the scalp and also of the face, the pus-germs find a well-prepared culture-medium, and those children are subject to infantile eczema. It may be that in their constitution there exists some tendency to the development of eczema in consequence of a tenderness of the skin and of a poor general nutrition. Dentition has often been considered a cause of recurrent infantile eczema. It may be that, from an angioneurotic condition, the skin of those children is prone to be affected by eczema. In adults, eczema may develop as a consequence of acne rosacea, which we often see as the result of catarrh of the stomach. Eczema may follow the application of

salves, of irritant chemicals, of exposure to the x-ray. In consequence of pediculi capitis, an eczema of the impetiginous type develops on the scalp. For this reason, pillow-cases, towels and napkins must be watched and not allowed in a family to be used promiscuously when there is a case of eczema. Flannel garments are greatly objectionable, since they cause itching, irritation, and not infrequently eczema. Seborrheic eczema of Unna often is found in those wearing flannel garments, and the flannel eczema, or flannel rash, is known to everybody as the result of those garments. Indeed, in the flannel, there is the irritation of the skin caused by its roughness, the warmth, the perspiration, the maceration of the epidermis, the scratching, the inoculation of the pus-germs, and the eczema. We must point out that, when someone has suffered from eczema, the skin remains so liable that any slight irritation is capable of bringing back the trouble.

Summary of Causes

Summarizing, we see, then, that eczema is the result of pus-germs affecting the skin and causing that peculiar weeping eruption. The causes, however, are those producing irritation in the skin, of mechanical, chemical, thermic, physiochemical, or of electrical nature. All those external causes produce dermatitis which affect the epidermis and prepare it for the attack of the pus-germs. Internal causes are all those which produce hyperemia, congestion of the skin, and vasomotor disturbances. Moreover, all those conditions of the organism which render the blood below the standard diminish the nutrition of the skin and, consequently, its resistance, and render it an easy prey to parasitary germs. Parasites, especially the different varieties of trichophyton, often are at the basis of the relapses and of the stubbornness of eczema, which never will heal until the trichophyton is entirely eradicated.



The Anatomy and Physiology of the Stomach

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Editor *The Buffalo Medical Journal*, Captain, M. R. C.

(Continued from July issue, page 497)

Gastric Muscle

NEARLY, if not quite, all tubes of the body, of every kind and size, that have muscular walls at all, anticipate the usual construction of such artificial tubes as garden-hose and gas-tubes, by having an internal muscular coat arranged in rings and an external muscular coat the fibers of which are longitudinal. In the case of the stomach, the external, longitudinal muscle-fibers of the esophagus are continued also over the proper longitudinal coat of the latter and, as the two organs join at an angle, the esophageal fibers continued over the stomach have a somewhat irregularly oblique direction.

It has long been taught that the proper circular and longitudinal coats of the stomach act to produce a peristaltic wave, while the oblique coat adds an irregular churning action. But, neither observation of the exposed stomach of animals at vivisections nor of human beings at operations, nor observation with the fluoroscope confirms this sharp distinction between peristalsis and churning.

So thoroughly imbued have we been with the theoretic description, however, that sufficient attention has not been called to this point. The peristaltic waves of the stomach do not, it is true, proceed with quite the same regularity as in the tubular esophagus and intestine, but, no distinction of two kinds of movement can be made out by an unprejudiced eye.

External Coats of Stomach

Outside of the muscular coats of the stomach, is a rather dense, supporting fibrous coat, connected by delicate connective tissue to the visceral layer of the peritoneum, which covers practically the entire stomach except at its attachments, and which, strictly speaking, is not a layer of the stomach itself.

Without entering into the anatomic details of the blood-vascular, lymphatic, and nerve supply, it is of practical importance

to remember that all the larger trunks enter or leave in the folds of peritoneum along the greater (inferior and left) curvature and the lesser (superior and right) curvature—using these locational terms as if the organ were flattened out antero-posteriorly. While the blood enters the stomach from the main arterial supply, as it would any other organ, the venous blood, with some minor exceptions, goes into the portal vein and thence through the liver, so that any obstruction on the portal trunk or because of lesions of the liver itself tends to produce a congestion of the stomach, sometimes so great that hemorrhoidal dilatations are formed. When, as may happen, these latter rupture and produce massive hemorrhage, this is very apt to be confused with that due to peptic ulcer or cancer. More often, a chronic congestion and catarrh is produced, chiefly from the lesions of hepatic sclerosis, in this climate, and minute ulcers or bleeding points are very prone to develop, these still more closely simulating the ordinary small hemorrhages of gastric cancer; the picture being still further confused by the fact that both lesions occur most frequently in rather advanced life and otherwise resemble each other closely until cancer gives rise to unmistakable diagnostic appearances that render the diagnosis of little practical value.

I may cite a case which illustrates, not only the practical difficulties of formulating a diagnosis, but, the difficulties even in an academic sense.

An elderly man had a sudden, quite massive venous hemorrhage from the stomach. His liver was contracted and there were the venous twigs following the diaphragm which many years ago I described as diagnostic of hepatic sclerosis. With considerable hesitation, the diagnosis of back-pressure hemorrhage, due to the bursting of veins dilated from the effects of hepatic sclerosis on the portal current, was made. I have, in other cases, made this differential diagnosis against cancer, or, let us rather say, "guessed" right, and had the matter corroborated by necropsy in

fatal hemorrhages and by long persistence of life and general health (in one instance, for ten years, with death, finally, from cerebral hemorrhage).

In this case, the diagnosis was, apparently, corroborated by the cessation of symptoms and the absence of indications of cancer. By a curious succession of serious conditions, the patient nearly choked to death from swallowing an oyster-shell a year or so later; then, after another interval of good health, there developed laryngeal tuberculosis, from which he died. At necropsy, the hepatic sclerosis and venous congestion and dilatation of gastric veins was corroborated, but, there also was revealed a small nonulcerating scirrhus cancer of the stomach. The question naturally arose (and, so far as I can see, it is quite unanswerable) as to how long had the cancer existed? For that matter, how long has any cancer existed, either in the sense of raising the question whether all cancers develop from "rests," or, in the more practical sense, how long they have existed in appreciable extent, if exposed to view, up to the time of yielding appreciable symptoms which gradually increase till they enable us to make the proper diagnosis or, more fortunately, still, that enable us to drive the patient to a successful operation in advance of a positive diagnosis?

In the case in question, while the general condition of the stomach and especially of its venous blood supply might be construed as confirming the original diagnosis of back-pressure hemorrhage, the question as to duration of cancer took this special form: Could a limited cancerous area produce a massive hemorrhage, remain quiescent for a period of about three years after the hemorrhage, and heal over to such an extent that no sign of ulceration is present at necropsy?

The anatomy of the gastric lymphatic trunks is important from the standpoint of cancer. They extend the whole length of the lesser curvature, to the cardia, but, only about half of the distance along the greater curvature where there is said to be a lymph-node palpable in gastric cancer. I confess to the same failure to palpate this lymph-node as in the case of the supracondylar node said to be always present in syphilis.

The lesson as to the amount of gastric tissue to be removed in radical operation

for cancer is a very practical one—or at least would be if it were easier in practice to find surgeons who are willing to undertake a radical operation and not hypnotize the attendant and the patient into a gastroenterostomy.

Perhaps because of the stiffening of the stomach, due to the vascular, including lymphatic trunks, up to the point mentioned on the greater curvature, it is here where the peristaltic wave is deepest and an indentation can even be made out occasionally by such purely external methods as auscultatory percussion. The nutritional and innervational factors depending upon the limits of trunk vessels and nerves also determine this point as the site of election of certain ulcers and cancers and of hourglass contractions.

A caution as to x-ray findings may best be enforced by citing a case in which the diagnosis of hyperchlorhydria was made, the area being normal on auscultatory percussion. While there seemed to be no necessity of an x-ray examination, the patient insisted upon it, and, as a result, the radiographer reported the presence of an hourglass stomach—to my deep chagrin. I went over to the laboratory to inspect the plates and was, at first view, convinced that I had failed to diagnose a clearcut case. Possibly with the idea of rubbing it in, the radiographer showed me more plates, all beautifully typical of hourglass contraction; however, the line of stricture was at different places in the different plates. Beyond a certain point, evidence becomes too convincing to be true. Then it was that the fluoroscope revealed the real condition. We had to do, not with an hourglass stomach, but, with a very marked peristaltic wave.

It should be remembered that the bismuth does not follow the external outline of the stomach, but, rides on the internal glandular membrane, which is liable to be thrown inward by an elevation of rugæ as the wave passes, if, indeed, the mucus, food remnants, and excipient of the bismuth do not allow it actually to be bounded off from the internal surface of the stomach. Thus the peristaltic-wave picture is exaggerated by the x-ray and the bismuth always indicates the extreme inward projection of the stomach at any given point.

Regional Anatomy

Anatomical charts depict the stomach as fully distended, to a capacity of about

2500 mils, with a peculiar curve usually described as gourd-shaped (although only a few gourds attain this particular shape), lying in the epigastric and left hypochondriac regions, with the pyloric portion passing the median line well to the right. Such a stomach, while potentially correct in outline and size, is never encountered, normally, but, would call for immediate evacuation, in order to relieve the distention, if, indeed, it did not kill by pressure upon the heart before relief could be afforded. But, even if the latter accident did not occur, any such degree of distention and weight would result in gastric dilatation or ptosis, or both, if it were long continued or repeated. Full nutrition with foods of average bulk, requires, at most, a distention to about 1500 mils' capacity, for short periods.

The continuous free escape, even of considerable quantities of liquid and semi-liquid contents, occurring rhythmically almost immediately after ingestion is begun, reduces a light test meal, from a bulk of 250 mils, to 100 mils within an hour, and the stomach, even during and after a fairly hearty meal, including several glassfuls of liquid (approximately 200 mils each), does not often hold more than 1000 mils at any given moment or retain more than 500 mils for more than an hour. After one hour after a very light test meal up to five hours after quite an elaborate dinner, until the next meal, the stomach is nearly empty. The "acute gastric dilatation" of surgeons is, probably, rather a condition of distention with liquids and gas or air, approaching the anatomic picture of the supposedly normal stomach, than a true dilatation; although the latter may, of course, develop or may have existed before operation.

The anatomic picture of the stomach rises to the fifth left rib, the ordinarily full stomach to only about the seventh. The greater curvature reaches its lowest point 1 to 2 inches above an equator drawn through the umbilicus, and the same distance to the left of the median line. The pylorus is freely movable, usually palpable with difficulty or not at all, unless it is pathologically hardened in some way, including that by muscular contraction. It is located at about the level of the tip of the ensiform cartilage and a little to the right of the prolongation of the right margin of the gladiolus.

Instrumentally considered, the cardia is 40 cm. from the incisors; the bottom (not

the fundus) of the stomach is almost exactly 55 cm. (with a slight difference according to stature); while the pylorus, following the natural curves, is 60 to 65 cm.

Moderately distended, the projection of the stomach on the anterior abdominal wall, disregarding the pyloric extension, is an ellipse, with its major axis at an angle of 45 degrees. The more slender and long-bodied the individual, the nearer does the axis approach to an angle of 60 degrees, while in flabby, large-waisted and short-bodied individuals it lies at an angle of about 30 degrees from the horizontal. Exceeding these limits, the stomach may be considered abnormal, even if the direction of the axis is habitual and, in the first type, inevitable, because of the small waist-room available after allowing for the vertebral column, great vessels, and the necessary presence of portions of other organs. Reference is made, under present fashions, not to tight lacing, but, to congenitally small-waisted persons, mainly women. Tight lacing is practically a dead issue, along with the constricting garter. A stomach that is too nearly upright or too nearly horizontal has up-hill work, in the literal sense, to extrude its contents through the pylorus and almost inevitably tends to become dilated or ptotic.

A great many writers confuse the two conditions, dilatation and ptosis, and it must be admitted that they have much in common in etiology and tend to be associated; however, the distinction should be made, according as the upper part of the stomach does or does not maintain its normal level, as defined, without regarding merely the level of the greater curvature.

These data can be most easily obtained by recourse to x-rays, with due allowance for the fact that an instantaneous radiogram is misleading, even if strictly correct, in the same way as an instantaneous photograph, the fluoroscope permitting of a fairer conception of size and location. Transillumination does not necessarily show a luminous area corresponding exactly to the stomach, and is misleading. Auscultatory percussion or its modifications may be employed with confidence by those who are expert, but, it takes time to acquire the art—a point which many men of good reputations do not appreciate, hence, denouncing the method simply because they imagine that their general reputation and standing should enable

them to pass judgment almost at the first trial.

The lower border can be determined pretty accurately by the thermic sense, after the patient has taken a glassful of ice-water. Mark I. Knapp's claim, that the areas of the stomach and various other organs can be determined by inspection,

at first thought seems incredible, but, the interruption of the respiratory wave, by the rebound of the body-wall from a subjacent organ, really is visible in a great many instances. It is necessary to sight obliquely and to observe the respiratory wave closely for a few minutes.

[*To be continued.*]

After Thirty Years—V

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

Vacations

IT is pretty generally recognized that the doctor, like everybody else, needs a vacation occasionally. The closeness with which he is bound to his work practically puts him on duty twenty-four hours in the day. He may have on hand a good deal of idle time, yet, there never is an hour that he can be sure of calling his own. He may have bought theater-tickets or planned an outing with his friends or have invited guests to dinner and, yet, at the last moment, he may be called away to some patient that can not be refused. When he goes out of town, his business stops entirely. The merchant's business will go on when he himself goes on a journey; the farmer's crops go on growing when he leaves home; but, the doctor's business comes to a standstill the moment he is out of reach of the telephone. Even the mere absence of a half-day may cost him heavily. For example, take this occurrence:

During the World's Fair, one day, I had planned to spend the afternoon at the Exposition, but, a patient came to the house and delayed me so much that I missed my train, greatly to my disgust. During that afternoon, I was called to an accident-case that netted me over 200 dollars during the next month. Had I gone to the fair that afternoon, I probably never should have known how costly a holiday I had spent. The patient who delayed me was humbly apologized to—in my own thoughts, that is—for the hard things I had said of him (also in my own thoughts) when I found I had missed that train.

For such reasons as these, doctors, as a rule, stick pretty closely to business, so

that, in consequence, a yearly vacation, really becomes a necessity. Some years ago, I sometimes would pass three years, once even five years, without taking a vacation; however, each time a partial breakdown in health convinced me that, instead of "not being able" to afford a vacation, I actually could not afford to do without this relief. In passing, I might remark that, when on a vacation trip, I often made acquaintances who afterward became patients, so that the time is not entirely lost from the business-point of view. Some of my best patients were acquired in this way.

When the doctor decides upon a vacation, the first thing to do is, to decide where he wants to go and what he will do. Here, personal tastes and the size of the bank-account ordinarily are the deciding factors.

One man enjoys getting into the country and loafing away his time in a hammock, novel in hand. Another is perfectly happy a-fishing or a-hunting. One prefers to go to a resort where he can find plenty of society, another wants to be alone in the woods or mountains or maybe camping with a congenial friend. The man with scientific tastes may prefer to botanize, geologize or chase butterflies and bugs. To some, a lake or ocean voyage gives the height of enjoyment; others prefer a walking tour or a cross-country trip with a bicycle or automobile. War-saving, just now, may lead some even to take their outing by working on a farm.

Essentials of a Vacation

Perhaps the most important feature of a vacation is, to get a change—a change as

different as possible from our daily routine; even work is a rest if it be different from our ordinary work. But the vacation should always be spent in the open.

Also, attitude is very important. What philosopher was it who said, "Boston is a state of mind"? You can make your vacation either a failure or a success, according to the mental attitude that you carry into it. It is desirable to dismiss all thoughts of business and for the time being to make a business of having a good time. There may be things at home that have a tendency to worry you. That last fracture-case, perhaps, did not turn out quite right or a patient may have taken French leave, owing you a large bill. Forget it! Time enough to worry when you get back. If you go resolved to have a good time and to help others have a good time, if you are determined not to pay any attention to the little annoyances and inconveniences that are inevitable in every outing, you have laid the foundation for a vacation that will bring you back full of energy and health for another year's work.

So far as possible, every vacation ought to be a return to the simple life—outdoor life, with simple food and unlimited fresh air. There is in most of us an instinct that makes us long at times for the life of primitive man. In boyhood, it crops out in the desire to live in caves, to construct dugouts and playhouses. How vividly I remember the keen enjoyment we got out of such shelters! I could point out today the site of a famous bark wigwam on a forest hillside of long ago, where a few of us enacted the lives and adventures of Fennimore Cooper's Indians and hunters. And when later we were lucky enough to find a piece of an old sail large enough to make a tent, what a sensation! No rookie in our cantonments today is prouder and more conscious of his importance on his first guard duty, than I was during my first "sentry-go" before that tent. Any fellow who came along without the password was marched straight to the guardhouse (an old hollow stump). Some of those passwords were wonderful constructions. It was shortly after the Crimean war, and that helped some. I remember how one day we had a dispute in selecting the password for the day; I was strong for "Sebastapol", while a chum insisted that "Inkerman" sounded more solemn, while another

stood firm for "Balaklava", claiming that it sounded more reckless.

Similar was the joy I used to feel in the gray dawn of frosty mornings on the farm, when, a barefoot lad, I went to the pasture lot to bring home the cows for the morning milking. As I started up each cow, the earth would be warm on the spot where she had lain; and what a delicious sensation it was to huddle down for a minute or two and warm my bare feet and legs on the warm earth. It was getting close to nature.

Men are but boys of larger growth and most of them feel at times the instinct to return to the primitive life. It is what Kipling calls "The Call of the Red Gods." I have only to read his poem, "The Feet of the Young Men," to feel the old stirring of the spirit and longing for the wild, "for, the Red Gods call me out and I must go".

It makes the blood flow a little faster in the veins to read :

Who hath seen the beaver busied?

Who hath watched the blacktail mating?
Who hath lain alone to hear the wild goose
cry?

Who hath worked the chosen water where
the ouananiche is waiting?

Or the sea-trout's jumping-crazy for the
fly?

Or this:

Who hath smelt wood-smoke at twilight?
Who hath heard the birch log burning?

Who is quick to read the noises of the
night?

While resting

On a couch of new-pulled hemlock,

With the star-light on our faces,

In the camp of proved desire and known
delight.

And the eating! What zest the wild life gives to the appetite! The simplest fare becomes the ambrosia of the gods. To sleep late in the morning when it is our companion's turn to act as cook; to wake up with the odor of frying bacon in our nostrils! Is there any fragrance in the world like it to a hungry man, or any music like that sound which Harry Lauder speaks of as "hearin' the ham and eggs skirlin' in the pan"?

Every vacation should provide for three very important needs, namely: plenty of fresh air, by outdoor life day and night; simple but nourishing food; and safe drinking water. On farms and at some resorts, the supply is from wells, and these are not

always protected from contamination as they should be. Too often the city dweller brings back in his system the germs of typhoid fever when returning from his summer outing.

Systematic physical exercise during a vacation is a decidedly beneficial feature for persons whose habits at home are sedentary. While a doctor's occupation hardly can be classed as sedentary, yet, there are many in the profession who get no more active exercise than the operating of an auto or running for a street-car. A walking-trip may be made very enjoyable with a good companion. Of course, one must begin moderately, getting the muscles hardened gradually. This affords, possibly, the best way of seeing a country, as a pedestrian is not limited to the roads. For scientific study, it is the ideal way.

Fifteen or twenty years ago, a bicycle-trip was a delightful way of spending a vacation, and it is a great pity that so fine a sport should have been allowed to die out. There are two reasons for this. With the majority of people, it was simply a fad, so, when the novelty wore off, the fad was discarded. Then, of late years, the automobile has made the bicycle rather unsafe. To ride a wheel today among the swarms of those fleet cars that fill the roads, is, to take one's life in one's hands. I was so averse to giving up such a fine exercise that, in spite of its having become unfashionable, I continued to ride my wheel up to five years ago. After several narrow escapes and after a friend who had kept up his riding had been run down by an automobile and had spent several months in the hospital, I concluded that discretion was the better part of valor and sadly resigned my steel steed to the junk pile.

An auto-trip is a fine way of spending a vacation, provided that good judgment be used. The temptation is, to travel too fast and too far in a day. The passenger becomes so wearied and exhausted that he loses his zest for seeing the country, while the man at the wheel is under such a nerve-strain that it is a joke to call it a rest. Besides, the driver has to keep his attention so closely on his road that he has little chance to enjoy the landscape. Still, an auto-trip can be made most enjoyable if it be taken leisurely, with frequent stops when there is anything worth seeing.

A lake- or ocean-voyage would be a part of every vacation for me if I could always

have my choice. Nothing can take the place of that cool, clear, ozone-laden air. I am never quite so happy as when I am at sea either on fresh or salt water. I have made good use of both oceans and all the great lakes, and I always returned full of regret that I had not more time. We, of Chicago, are highly favored in having a magnificent body of fresh water at our doors, with the thousands of miles more in direct connection with it. There is no finer field for vacation voyages than the St. Lawrence chain of inland seas and rivers. The wonderful clearness of Lake Superior, where the bottom often is visible at fifty feet; the grand scenery of its shores; the beauty of the 30,000 islands of Georgian Bay; the falls and rapids of Niagara; the fairyland of the Thousand Islands of the St. Lawrence; the sublime rapids of the same river; the historic interest and quaintness of Montreal and Quebec; the gloomy grandeur of the Saguenay; these are but a few of the things that make the St. Lawrence a king among rivers.

I have spent more vacations at Mackinac Island than at any other place, except the country of my boyhood. It is an ideal spot for a vacation. One can have a fine lake voyage going and coming. The climate is always delightfully cool in the hot months of summer and very nearly hay-fever-proof. The air is clean and full of ozone. There is no noise and no rowdyism. The beauty of its forests is unsurpassed. It has many objects of geological and historical interest. One can have plenty of society or complete solitude, as one lists. Near by, is a fisherman's paradise in the Cheneaux Islands (often miscalled the "Snow" Islands). It would seem that no one with the usual human interests could possibly suffer boredom at Mackinac.

I have very pleasant recollections of a unique vacation I took in 1895. The previous winter, riding on a certain railway line, my leg was injured, causing me some suffering and also loss of time. When it came to a settlement, I suggested to the officials that I was not after money, but, that I had long wanted to make a geological trip over the country covered by their lines and that I should appreciate transportation the following summer in vacation time. The company responded so generously that I was able to go virtually everywhere in Wisconsin, Minnesota, Dakota, and Manitoba. A few years before that, I had been severely bitten by the

geology-bug and had contracted a special mania for glacial geology. The region indicated is one of the most interesting in America from this point of view, so, I spent three happy weeks in looking up the traces left by the stupendous glaciers of the Ice Age, and I can say without exaggeration that it was one of the most fascinating explorations I ever made.

I may remark, in passing, that every doctor, indeed, every man who takes pleasure in the study of nature, ought to take an interest in this subject. Glacial geology is simply a study of the traces left by the glaciers of the Ice Age, when the frigid zone extended as far south as the Ohio River. It is the easiest of all the sciences, and the material for its study is to be found on any railway-journey or trip across the country. No other science gives one such an idea of the stupendous and overwhelming operation of the forces of nature as this. In truth, these geologic studies have added greatly to the pleasure of every vacation that I have taken during the past twenty-five years. It requires comparatively little book-study—just enough to suggest what to look for. And these evidences are so easy to discover that

not only he who runs may read, but, he who rides on a swift railway-train may do likewise.

A trip to Alaska affords a splendid opportunity for the study of this science, for, here can be seen the Ice Age in actual operation in the magnificent glaciers of that territory.

Summary

To sum up the elements of a good vacation in a few words, I would say:

1. Leave business, care, and worry at home. Forget them.
2. Resolve to have a good time.
3. Resolve to help your fellow traveler have a good time.
4. Pay no attention to petty discomforts met. They are part of the price. Above all, don't speak of them. The Lord deliver us from a complainer on a vacation.
5. Live the simple life—out of doors.
6. Don't read much. Give your eyes a rest.
7. Study nature—plants, animals, rocks.
8. Don't smoke more than ten cigars a day.

[To be continued]

2920 Warren Ave.

The Home Treatment of Tuberculosis

Based upon Early Diagnosis, Fresh Air, Nourishing Food, Physiological Rest, Strict Cleanliness, The Comforts of Home, and
Proper Medical Treatment

By J. M. FRENCH, M. D., Milford, Massachusetts

IN the May, 1917, issue of *CLINICAL MEDICINE* (p. 338) there appeared an editorial under the caption "The Diagnosis of Early Pulmonary Tuberculosis," which impressed me so strongly that I feel like adding a word in the same direction, with, however, especial reference to the treatment.

We all recognize the importance of the early diagnosis of pulmonary tuberculosis, or, as the editor put it, the diagnosis of early pulmonary tuberculosis; meaning, I suppose, the recognition of the disease in the early stages of its development. Of course, it is a self-evident fact that the sooner the condition is recognized, the less inroad it has made upon the system,

the better is the chance for recovery, and the quicker the recovery can be brought about.

In connection with early diagnosis, comes, naturally, the thought of home treatment. It is better for a large proportion of these patients (better *for* them and more satisfactory *to* them and their friends) that they remain at home, under the personal supervision of their family physician, than that they be sent away to a sanatorium.

Home Treatment Versus Sanatorium Treatment

There is no question but that the sanatorium treatment of tuberculosis-patients has accomplished wonders. The greatly

lessened death rate since the rise and spread of this plan speaks eloquently of this fact. The sanatorium triad of air, rest, and food has saved countless thousands of lives. Nevertheless, I must confess that I have never been a convert to the prevalent doctrine that drug-medication has no proper place in the treatment of tuberculosis. Neither do I believe that institutional methods and the environment of a sanatorium are, necessarily, more favorable to recovery than is the proper treatment in a well-ordered home. There are, it is true, certain facts in relation to the disease—such as the methods of becoming infected and of infecting others, and the knowledge of how infection may be avoided, of the importance of fresh air and how to enjoy it without danger, the need of rest and proper nourishment—which it is important for patients to know, and which, as a general thing, they do not understand until they have been taught them in a sanatorium or by the physician or nurse at home. There is, however, nothing difficult to understand about these things; it is the physician's business to know them, and they can be taught as well at home as in an institution. Moreover, it is hard to get in an institution the home-feeling and the cheerfulness which comes with home and friends; and homesickness constitutes an effective bar to recovery.

Essentials

Given, then, a patient of ordinary intelligence, who has confidence in his physician and is willing to put himself unreservedly in his hands, as he would put himself in the hands of the sanatorium staff; and given also a physician who has made himself properly familiar with the treatment of these cases and is willing to undertake the responsibility of the case and to make it his business to cure the patient if a cure is possible; given, also, that moderate degree of financial ability which is needed to supply the needs of the patient—given, I say, these things, and I believe that the tuberculous patients can be treated successfully at home, and that, with the advantage of an early diagnosis and an early start in the treatment, a larger proportion of them can be cured or permanently benefited, and that the improvement will come at an earlier stage of the disease, when less damage has been done to the system,

than can be accomplished by the usual treatment at the best of sanatoriums.

Since tuberculosis is a disease of innutrition, with its most common early manifestation in the air-passages, it stands to reason that fresh air and nourishing food are the first essentials of treatment. This is universally acknowledged today. It does not follow that feeding can not be carried to excess and so injure rather than benefit the patient; nor that drafts, cold, damp winds, and sudden changes in temperature may not undo all the good that comes from fresh air. As a matter of fact, I believe that much nonsense has been preached and practiced about fresh air and forced feeding. Fresh air in itself is a good thing, but, harm may come to the patient even along with fresh air. Good feeding is necessary, but, not every kind of food, nor feeding all the time, nor feeding more than can be utilized. Not what is put into the stomach, but, what is digested and assimilated is what makes good blood and good health.

Not all patients are benefited by the same kind of treatment, even when the general symptoms are similar. It is one of the advantages of home treatment that the patient is more likely to be treated as an individual, instead of as a "case"; as a unit, not as a part of a mass.

Some climates and localities are more favorable to consumptives than are others. Thirty years ago, I made a careful study of the death rate from consumption in different localities in the state of Massachusetts, dividing the state into five districts, upon the basis of topographical features, chiefly altitude and soil moisture. The results obtained pointed plainly to the conclusion that a moderately high altitude, with dry air and soil, tends to lessen the death rate from consumption, while the opposite conditions tend to increase it. Experience since that day has shown that sleeping in the open air in those climates that will permit of it is of great benefit to the consumptive.

Acting upon the strength of such conclusions as these, many consumptives have left their homes and gone into a distant country, seeking relief and cure from a more favorable climate and the outdoor air. In too many cases, especially advanced ones, this plan has proved a delusion and a snare, and the poor wanderer has died far

from home and friends, and died sooner and in far more discomfort than if he had remained at home.

Dr. Alcott's Personal Experience

Since debility always is present as the result of a tuberculous condition of the system, rest is an essential part of any effective treatment and must be provided in proportion to the extent of the debility. Yet, in all except far-advanced cases, alternate rest and exercise is better than continued rest. In my schooldays, I read a most inspiring story that was told of himself by Dr. William A. Alcott, a noted New England physician, teacher, and writer of the last century, which taught a lesson of interest to all consumptives.

Soon after having been graduated in medicine, finding himself likely to fall a speedy victim to that dread disease, consumption, and having, as he says, "all he could to do keep up a successful war with cough, night-sweats, purulent expectoration, and hectic fever," he resolved, after careful deliberation, to leave his home and strike out for himself, choosing a course which he well knew must result either in speedy improvement or early death. Going far out into the open country, he found a lodging-place where air was plenty and the sun was hot, and set out to walk from place to place, climb the hills, and take short, but gradually lengthened walks, and eating only what he found in the homes where he lodged. He had a hard struggle at first, but, he never lost hope nor the will to press forward.

Gradually he found his symptoms remitting—less cough, less fever, less expectoration and night-sweats. Soon he was able to work a few hours each day and eventually, by virtue of a strong will, hard work, and outdoor living, with only such food as he could eat with an appetite, he was so far restored as to be able to spend a life of more than three score years in the service of mankind—eventually dying, it is true, from the dread disease which he had fought so long and so well. Doctor Alcott's book, "Forty Years in the Wilderness of Pills and Powders, or, the Cogitations and Confessions of an Aged Physician," has stood for me, in all the years since first I read it, as proof that man, himself, by virtue of his mind and will, has much to do with settling the question of whether he shall live to a ripe age or die prematurely. A strong

mind, a hopeful spirit, good cheer, and steadfast determination will do wonders; and, although consumptives are proverbially hopeful, yet, even here these things do tend toward recovery. [Doctor Alcott's experiences vividly bring to mind those recorded more recently, by the late Dr. E. L. Trudeau in his autobiography.—Ed.]

Next to these fundamentals, come cleanliness—which we call asepsis—and the comforts of home. The first of these may, perhaps, be looked upon as indigenous in a sanatorium, though, as a matter of fact, it is far from always being so. However, the comforts of home are not as a rule found in a sanatorium or in any institution of the ordinary type. Indeed, they seldom are to be found anywhere except at home. Good beds, sunshine and shade, pure water and good food, cleanliness, rest when tired and exercise when rested—all these, together with the presence and encouragement of one's own family friends, giving hope, cheer, and contentment—these, I say, are the things that contribute to recovery so long as there is any chance of recovery, and, when even this is gone, still leave the confidence that nothing has been left undone and the knowledge that, when one comes to go down into the valley of the shadow of death, he will not have to walk the weary way alone, but, will have the comfort and support of father or mother, wife, children, loving friends all the way.

As for Medicinal Measures

When it comes to medicinal treatment, we have the digestants, such as pepsin, pancreatin, papain, bilein, and other well-known agents. Especially will these be needed when forced feeding is practiced; but, they fill an important place, in any event. Such digestive tonics as berberine and hydrastine, and such nerve-tonics as strychnine and brucine, and such agents for activating the phagocytes and strengthening the defensive forces of the system as nuclein and lecithin; iodine in various forms, specially as iodized calcium or calcidin, all these are of value in a large proportion of cases.

As a direct remedy for the tuberculous condition itself, I know of no better remedy than creosote. This is, indeed, no new thing, but, has been advocated and endorsed by a long line of medical worthies in many countries and throughout many years. Creosote was advocated for phthisis

by Reichenbach as long ago as 1833, by Bouchard in 1887, and since these dates by such men as Dujardin-Beaumetz, Dieulafoy, Germain Sée, Von Brun, Powell, Burney Yeo, Solis Cohen, Sajous, besides many others, all of whom agree as to its utility, although differing somewhat as to their explanation of its mode of action.

Shoemaker states that this agent has come into general use in the treatment of phthisis. It diminishes cough, expectoration, fever, night-sweats, and diarrhea; it has a soothing effect upon the stomach, checks fermentation, allays irritation, and controls vomiting.

Sajous classes creosote as an agent which enhances the nutrition and protective efficiency of the lungs. He considers it a valuable remedy in the first and second stages of tuberculosis, except when the element of asthenia is marked. In therapeutic doses, it excites the test-organ, thus increasing the autoantitoxin in the blood, and simultaneously depresses the sympathetic centers. The arterioles being dilated, an excess of blood rich in autoantitoxin is admitted into all the capillaries, including those of the diseased area, and the curative process is hastened.

Creosote is eliminated from the system chiefly by way of the lungs and bronchial mucous membrane, and to some extent also by way of the kidneys. By the former route, it acts as a stimulant to the bronchial secretions and as a sedative of bronchial irritation; while by the latter it serves as a sedative of the entire urinary tract. Its slow solubility and deficient absorbability also cause it to be carried into the intestines, thus rendering it an efficient intestinal antiseptic.

Value of Creosote and Calcium

Creosote is employed in many different forms and preparations. It is administered in the form of pills, of tablets, and of solution. Pure beechwood creosote is considered a desirable preparation, while in some conditions the active principle, guaiacol, is superior. I have had excellent results, especially in pneumonia, from the preparation known as thiocol, which, chemically, is a guaiacolsulphonate of potassium, and may be taken in large doses without irritating the stomach.

But, the preparation which I have used with the greatest satisfaction in bronchial diseases and in incipient and early tuber-

culosis, is the combination of lime and creosote known as calcium creosote or calcreose. This has seemed to me, not only the most acceptable to the stomach (with the possible exception of thiocol) but, the best in the entirety of its effect. It evidently owes its virtues, not only to the creosote, but, in considerable part, to the lime.

The special advantages of calcium in tuberculosis are indicated by the fact that it has been demonstrated by clinicians that calcium starvation is one of the prime factors in the etiology of this disease. See articles by Van Giesen and Lynch, in *The Medical Record* for November 27, 1908, and July 9, 1909, in which they show that lime-starved dogs fall easy victims to bovine tuberculosis, while the addition of calcium to their diet cuts short the progress of the disease, so that they gain in weight and are restored to health.

It is well known that calcium is an essential factor in forming the fibrin of the blood, and also that the healing of tuberculous foci in the lungs is essentially a process of calcification. Indeed, so long ago as my school days in the University of Vermont Medical College, Dr. Walter Carpenter, the professor of practice of medicine, used to tell us of the large number of cases of healed tuberculosis of the lungs that were revealed by autopsies, and which were characterized by spots of calcification in the lungs; and he taught us that, wherever in the lungs the process of calcification was set up in a tuberculous lesion, that was the beginning of the healing of that lesion.

In this fact, there no doubt is to be found the reason why calcium adds so materially to the value of creosote in the treatment of tuberculous and bronchial diseases in general. For, calcium creosote is of value, not only in tuberculosis, but, in pneumonia, chronic bronchitis, and many forms of cough as well. I have used it for a good many years in chronic bronchitis with excellent results, finding it to loosen and lessen the cough, while at the same time it acted as a tonic to the nutritive system in general.

Since innutrition is an essential element of tuberculosis, the fact that calcium creosote is a valuable gastrointestinal tonic and antiseptic adds greatly to its utility in tuberculous conditions.

A medical friend whom I had known intimately for a long time suffered for a

number of years from severe hyperchlorhydria and other clinical symptoms suggesting gastric or duodenal ulcer. By careful diet and prolonged rest, he recovered sufficiently to be able to resume his professional work. One day, after cranking his motor car, he had an attack of pulmonary hemorrhage, and this recurred several times within the next year or two. Knowing the seriousness of his condition, he kept it, and himself, well in hand, and by care and appropriate medication was able to carry on a thriving practice, serving on the medical staff, qualifying and serving as roentgenologist in the city hospital in a New England city, and continuing his usefulness in many ways. It was while telling me of his condition one day that he remarked incidentally that he did not think he would be alive had it not been for calcium creosote, or calcreose, which he had taken continuously for a considerable length of time.

Coming from a man in whom I had the utmost confidence, this seemed to me a

strong testimony, and led me to use the remedy increasingly in my practice; and, while I do not claim for it any other effects than those indicated by its proven physiologic and therapeutic properties, yet, I feel that my experience has justified his high estimate of its value in these directions. That he finally succumbed to his dread malady, does not detract from the value of the remedy which lengthened his life, increased his comfort, and added to his usefulness.

Summing up, it seems to me that the home treatment of tuberculosis is indicated (1) when there are no children in the family or the conditions are such that they need not be exposed to the contagion; (2) when the patient and his friends are of sufficient intelligence to cooperate with the physician in carrying out the details of the treatment; (3) where there can be adequate medical and nursing-service for a sufficiently long period of time; (4) when there are facilities for proper outdoor life under favorable hygienic surroundings.

The Treatment of Chronic Diseases

Diseases of the Nervous System

By GEORGE F. BUTLER, M. D., Wilmette, Illinois

(Continued from July issue, page 513)

THESE special paralyses are all forms of acute or chronic peripheral neuritis, either of the true peripheral or of the nuclear type. If they are nuclear, they are always the expression of some underlying condition of the central nervous system, the treatment of which is the treatment of the neuritis. If they are sheerly peripheral, then their treatment is precisely the same as that of simple neuritis, to which the reader is referred.

Landry's Paralysis

(*Acute Ascending Paralysis.*)

The pathology of this disease is that of a combination of acute myelitis and neuritis, of a very virulent and rapid type. The treatment is the same as that of acute myelitis and neuritis. Treatment rarely avails, however, as the process quickly involves the bulbar region and death occurs

because of interruption of the respiratory function.

Degenerative Diseases

The degenerative diseases of the nervous system admittedly are a more or less hopeless class of ailments—a character which they share in common with primary degenerations of all tissues and organs, just as they share their essential pathology, namely, a primary degeneration of the tissue proper and its replacement by connective tissue. The prognosis is not very bright, even under the most favorable conditions, and under the most intelligent treatment. Degenerative processes have a disagreeable way of progressing in spite of anything that may be done to check them; the humiliating truth being that we seldom succeed in making any impression upon their course.

Still, for all that, it is neither scientific nor professional to stand aside, with a

shrug of the shoulder, and let things take their course. The ideal of a physician, to be sure, is, to cure disease. However, ideals not always are attainable. It is the duty of the physician to ameliorate where he can not cure and to limit where he can not altogether check the ravages of disease. And this he will most effectually accomplish, not by a "masterly inactivity" or by the senseless iteration of a wornout formula, but, by an active, intelligent, resourceful application of well-defined therapeutic principles, both abstract and concrete, to the pathology of the condition in question.

In this class of diseases also, the old-line plan of treatment shows a negligent disregard, if not a positive repudiation, of the morbid physiology of the case. The mainstay of its therapy is, direct stimulation, as represented in the habitual use of strychnine. Just what beneficial influence such a therapy can be expected to exert upon a tissue that is being slowly replaced by connective tissue, it is hard to understand. It only can stimulate the remaining tissue to greater activity and thus hasten its doom, meantime keeping the patient "on edge." If, therefore, this modest treatise should accomplish no more than to discourage the routine use of strychnine and kindred drugs in these diseases, it will not have been written in vain.

The rational therapy of degeneration is alterative, reconstructive, and antispasmodic. The threefold purpose is, to check interstitial hyperplasia, to assist in building up (not whipping up) the enfeebled tissue in a condition to degenerate, and to give the neurons physiologic rest.

The first two indications have long been therapeutic bugbears; but, the feasibility of meeting them has, more recently, been greatly enhanced by the fortuitous addition of two notable remedial agents to our materia medica, namely, chromium sulphate and lecithin. As to the first one of the substances just named—chromium sulphate—it has been shown that it exercises a remarkable power of checking interstitial hyperplastic degeneration that is far superior to that exerted by gold; while the other—the lecithin—is known to furnish an important element in the upbuilding of nerve-tissue and in fortifying it against degenerative tendencies. These two agents

play a large part in the therapy laid down in this article.

The degenerative group of nervous diseases includes the following heads, under which they will now be discussed in detail: Cerebral hemorrhage, cerebral embolism, cerebral abscess, cerebral tumor, general paresis, chronic myelitis, locomotor ataxia.

Cerebral Hemorrhage (*Apoplexy*.)

Although cerebral hemorrhage is classed as a degenerative disease, because the underlying pathology is a degenerative process, it is to be remembered that the actual attack usually is the consequence of an acute congestion, and, therefore, requires treatment similar to that of encephalitis.

When seen immediately after the attack, while the temperature still is elevated, the pulse full and bounding, the face flushed, and other symptoms of active congestion are present, the patient should be placed in a recumbent posture, with the head slightly raised, cold (but, not iced) applications made to the head and hot applications to the hands and feet, care being taken, however, not to burn the skin, bearing in mind that the patient is quite unable to protect himself against undue heat. A sharp purge, or, better still, a soapsuds enema, thoroughly to clean out the bowel, followed by a stimulating enema of warm water with a little mustard in it, will greatly assist in drawing the congested blood away from the head. Inasmuch as nearly always the patient is unconscious, whatever internal remedies are given must, as a rule, be administered hypodermically or else per rectum. Atropine, 1/250 grain every fifteen minutes, is good treatment. But, in my experience, veratrine and aconitine are the drugs, *par excellence*, for this condition. Both of these, in doses of 1/150 grain each, may be given hypodermically; however, they are likely to cause considerable pain when administered in this way; hence, equally good, if not quite as prompt, results may be obtained by giving them in double or treble the dosage, in warm water, per rectum. They should be repeated every half hour until the pulse softens and shows a return to normal.

As soon as reaction begins to set in—as evidenced by the return of the patient to consciousness, the dropping of the tem-

perature, the weakening of the pulse, the pallor of the face, et cetera—all of these defervescent measures should at once be discontinued and the condition of the patient carefully watched, to see to it that collapse does not occur. It is well at this stage to forestall such a possibility by giving small quantities of hot weak tea at frequent intervals. Whisky and brandy, so commonly advised and given in these cases, are bad; first, because they often overshoot the mark and bring on another inflammatory attack, and, second, because they are followed by a reaction of their own later and increase the liability to secondary collapse. If the threatened reaction be serious, a little strychnine may be given; this to be discontinued, however, as soon as the danger of collapse is averted. In short, the successful knowledge of what *not* to do, rather than being in too great an eagerness to *do* something, is what counts; the danger of bringing on another hemorrhage being, as a rule, much greater than that of collapse.

The After-Treatment

The after-treatment of these cases requires great nicety of judgment. The general indications, of course, are, to assist in the absorption of the clot and to reduce and keep down the blood pressure. But, as many of the instances of cerebral hemorrhage occur in enfeebled elderly persons, it is not always wise or practicable to carry out a course of absorptive and eliminative treatment that would be lowering to the general health. Where the patient is middle-aged, plethoric, and sthenic, one hardly can be too rigorous in the restriction of the diet or too energetic in promoting elimination, for, his future safety depends upon preventing the accumulation of autotoxins in his blood. Such patients should be kept upon a dietary as low in nitrogen as is consistent with the barest protein nutrition. Even sweet milk is undesirable; buttermilk, on the contrary, is excellent when taken in moderation. They should avoid coffee, alcohol, sugars, and all stimulating condiments, but, drink freely of mild citrous fluids and eat mildly acid fruits. For long periods at a time, they should take a mixture of tincture of *nux vomica* and tincture of *colchicum* (say, 3 drops of each in infusion of

gentian), before meals; also a saline laxative every morning on arising.

In aged or enfeebled patients, the treatment must be somewhat different, albeit as far as possible upon the same general principle, that is, the avoidance of auto-toxemia. In dietary, the aim must be, to nourish, while producing a minimum of waste matter. Broths, meat-juices, eggs, buttermilk, lean meat, cooked fruits, green vegetables, and the like are easily digested and fully utilized, with but little by-produce. As with children, so with old people, the less medicine they take, the better. *Colchicum* is, as a rule, too violent an eliminative for them. A little *nux vomica* before meals is an excellent stimulant to promote elimination and metabolism. A 1-grain pill of phenolphthalein should be given every night or two, followed by a dose of sodium phosphate in the morning. Frequent sponge-bathing is an essential to proper elimination in old persons.

For promoting the absorption of the clot, I have found the following combination more effective than anything else I have tried: Mercury biniodide, arsenic iodide, extract of *phytolacca*, and iodoform. The quantities and proportion of this combination are to be varied according to the age and condition of the patient.

In the comparatively young and sthenic patient, every one of the ingredients may be given to the limit of tolerance. In older and feebler patients, the dosage of all the components must be considerably smaller, especially that of the iodoform and *phytolacca*, which are not well tolerated, while that of the arsenic iodide may be proportionately a little larger, since it is an alternative tonic well borne by old people. Under this remedy, absorption usually proceeds as rapidly and as far as it is possible to occur; and it is really surprising to see the improvement that takes place in the focal symptoms. But, of course, we cannot expect, even at the best, to obtain more than fifty or sixty percent of restoration in the impaired neurons.

In severe cases, where the hemiplegia is extensive and profound, there naturally is great danger of muscular contractures during the period of neuron restoration. To avoid this, the muscles should be systematically massaged and also the galvanic

current applied, with one pole on the cord and the other on the various muscle groups. A moderate, preferably ascending, current should be employed, and violent alternations and reversals avoided. It is, in fact, well to make this a routine practice in all cases of apoplexy, whether severe or mild.

Cerebral Embolism and Thrombosis (*Softening of the Brain*)

Except for the congestion and violence to the brain-tissues which attend cerebral hemorrhage, the pathology of cerebral embolism and thrombosis is practically the same as that of the former disorder, and the treatment, therefore, is the same.

The shock of embolism is a negative shock, clinically comparable to the reaction after a cerebral hemorrhage; hence, if any treatment be applied at all to this phase of embolism, it should be the same mild stimulation that is recommended in the reaction of apoplexy. Thereafter the management of the case is precisely the same as that of the after-treatment of cerebral hemorrhage. Cerebral thrombosis is attended by no sudden onset, of course, but, is gradual and progressive. As soon as the diagnosis is established, the absorptive and eliminative treatment outlined under cerebral hemorrhage should be instituted. Of all three conditions, thrombosis is the most hopeless. No known treatment will arrest the degenerative process. The most we can hope to do is, perhaps, retard it a little, and to make the patient's condition as comfortable as we can for the remainder of his life.

Cerebral Abscess (*Suppurative Encephalitis*)

For this condition, there is absolutely no available treatment but surgical intervention. The skull must be trephined and the abscess drained; and the earlier this is done, the better the outlook for recovery. For particulars of this procedure, the reader must refer to a work on surgery. If, for any reason, it is not justifiable or practicable to operate, nothing is left to us but the most sheerly symptomatic treatment, of which the chief feature is the relief of the pain by means of opiates and bromides.

Cerebral Tumor

Cerebral tumor, the same as cerebral abscess, admits of no treatment but that of surgical removal. However, inasmuch as

it is not possible to tell, with any degree of certainty, whether or not the supposed tumor is a syphilitic gumma, it is advisable to try the effect of antisyphilitic remedies before resorting to operation. Mixed treatment should be prescribed, consisting of intramuscular injections of cyanide of mercury alternating with intravenous injections of salvarsan, and, later, large internal doses of potassium iodide, of 30 to 40 grains a day. In the majority of cases, it will be found that this treatment has no influence, for the simple reason that, as a rule, the tumor is not syphilitic. It then becomes a surgical question, of opening the skull and either removing the tumor or simply making a decompression-operation, for the relief of the intracranial pressure. If, for any reason operative interference can not be availed of, the patient must be treated symptomatically, as in cerebral abscess, with narcotics and sedatives. If convulsions occur, inhalations of chloroform should be resorted to.

General Paresis (*General Paralysis of the Insane. Dementia Paralytica*)

This disease is now universally regarded as a sequel of syphilis, and it is, therefore, customary to give injections of salvarsan, and to push mercury and iodides in the early stage. For the obstinate insomnia and headache in the incipient stage, sulphonal and trional are the best hypnotics, although in the severer cases we often are obliged to administer morphine and chloral. For the occasional attacks of acute mania, morphine and hyoscine should be employed in full doses. However, for the disease itself, no known remedy is helpful, and the treatment resolves itself into a care of the patient's person until death closes the scene. As the dementia deepens, this task becomes more and more trying; consequently, these patients should be removed to an asylum. Occasional periods of improvement quite often are seen under intelligent care, but they rarely are permanent, and death invariably occurs in from one to three years from the onset of the disease.

Chronic Myelitis

Whether it be the sequel of an acute attack or a chronic process from the beginning, the chronic form of myelitis is not, properly, an inflammatory disease, as its

name implies, but, a degenerative one. It is, in fact, perhaps the most typical of the degenerative diseases of the spinal cord, and its treatment and management may equally stand as representative for all chronic diseases of the cord.

The chronic myelitic patient should, from the onset of the trouble, avoid all physical overexertion and arrange his affairs so as to enjoy the greatest degree of mental rest. In severe cases, of course, he will be bed-ridden, and in that event the greatest care must be exercised to guard against bedsores. He should, if possible, lie upon a water cushion, his position frequently changed, and the pressure-areas washed with alcohol. At the least appearance of bedsores, these should be anointed with Peruvian balsam ointment (1 in 30), or covered with a salicylate plaster. If the bedsores become very extensive, the patient must be kept in a continuous bath.

The pains of chronic myelitis are not, as a rule, severe, at all events not in the early stages, and seldom require any very special treatment. Both the pains and the general spasticity are best controlled by bathing. Indeed, baths form an important and valuable item in the treatment of this disease, provided they are employed intelligently. The essential precaution is, to accustom the patient gradually to them, giving them at first no oftener than two or three times a week, limiting their duration to about ten minutes, and taking care that the water is not too warm (not more than 80 or 90 degrees). Their frequency and duration may gradually be increased, but, the temperature should never exceed that mentioned. The efficacy of the baths often is enhanced by the addition of salt to the water; also, by carbonic-acid gas.

Following the bath, a skilfully executed massage is beneficial; however, unless it can be given by a skilled masseur, it might just as well be omitted, for, the amateur rubbings of lay attendants are quite useless. Electricity, also, has an important and valuable place in the treatment, although, of course, too much must not be expected from it. It ought, however, to be tried in even the most apparently hopeless cases. Galvanism, here, is the best modality to employ, applying large electrodes over the spinal column and alternating the two poles on the diseased part. In

addition to this, the peripheries should receive galvanic treatment, and, where the muscles respond to the faradic current, this also should be employed. Only a moderate current, stabile or labile, should be used. The sittings should take place daily and be kept up for several months.

Medicinal treatment must be directed toward arresting, if possible, the degenerative process, giving the neurons physiologic rest and building up the nerve-tissue. For the first of these purposes, chromium sulphate is the best drug. It should be given in 4- or 5-grain doses three times a day and persisted in as long as it appears to exert any good effect. For the second object, no drug is equal to gelsemium, in 2- to 5-minim doses every six hours. If the restlessness and sensory discomfort be extremely marked it may be combined with small doses of hyosine, say, 1/500 grain. The third end is attained by the use of nuclein and lecithin, with which may also be given very small doses of arsenic, in the form of Fowler's solution, in not more than 1-drop doses twice a day. The ordinary stock "tonics"—iron, quinine, strychnine—have no place in the treatment of these patients. Their diet should be nourishing, but, simple and easily digested. Careful attention must be paid to elimination and especially to the avoidance of autotoxemia. It is well to prescribe an occasional course of colchicum and nux vomica, with some laxative saline the first thing in the morning. Their diet should include plenty of citrous fruits.

When the bladder is paralyzed, as it ordinarily is, it is necessary to employ the greatest care in keeping the urinary tract aseptic. The catheter must be scrupulously cleaned and disinfected, and the urine, itself, made aseptic by the administration of hexamethylenamine, salol or uva ursi. The latter has proven best in my experience, because it can be given for long periods without causing irritation of the membranes. It may be given in 15- to 20-drop doses of the fluid extract (or 2 grains of arbutin). If the paralysis is peripheral, so that there is incontinence of urine, some arrangement must be devised to drain away the urine without allowing it to erode the skin of the perineum and thighs. The first indication of cystitis must be energetically combated by washing the bladder out.

[To be continued.]

Sleep—That Knits the Raveled Sleeve of Care

By EDWIN F. BOWERS, M. D., New York City

Author of "Bathing for Health," "Zone Therapy," etc.

SLEEP is the most important thing in the world. More important even than food. For, we eat to sleep—but, we sleep to live. Men have gone sixty-three days without food and a week without water—but, they cannot last more than ten days without sleep.

Loss of sleep causes a form of starvation, for, the food we eat is digested and transformed into new muscle, brain, blood, and nerve-cells only while we are asleep. Endurance-racers prove this. Those engaged in six-day bicycle-races and other witless forms of diversion eat four or five times as much food as does the ordinary man. Yet, the end of the contest finds them hollow-eyed and cadaverous. Loss of sleep—more than physical exertion—prevents them from transforming food into tissue.

Sleep recharges the exhausted body-batteries and fills the organic furnace with fresh fuel. Sleep is a positive process—not a negative one. It isn't merely a stopping of bodily activity. It's the substitution of a constructive process for a destructive one.

Only while we are unconscious do we fully recuperate. The deeper the sleep, the quicker the recuperation. The lighter and the more disturbed the sleep, the more we need of it—the longer it takes to effect repair.

Active Waking—Restful Sleep

An active, energetic waking life helps to bring about restful sleep. A sluggish, inactive existence tends to unrefreshing sleep and insomnia.

The constructive building-value of sleep explains why babies—whose chief business in life is to grow—spend sixteen or eighteen hours a day sleeping, and even then some of them do not get enough. The aged, whose building powers are low, sleep lightly and waken early. They do not stay awake because they do not need sleep, but, because they cannot get it. They have lost reconstructive power. Their daytime dosings and drowsings are not really sleep. They

are torpors from exhaustion—poisoning from faulty elimination.

The quality of sleep is everything. An hour's nap, under favorable conditions, is more reconstructive than an entire night's restless, dream-ridden sleep.

Many who sleep "deep" are able to do with four or five hours of it—while light sleepers might require twelve or thirteen hours to gain the same degree of recuperation.

Nine hours of sleep is a fair average for a healthy man—a half hour or an hour more for a woman. The sleep period represents the time required to restore the oxygen balance in the tissues and to recharge the batteries. Hence, it should last until the process of restoration is completed.

Do not try to emulate the pernicious example of Napoleon. The Duke of Wellington, Thomas Edison, and others who have abused their constitutions by staying awake when they should have been asleep. "Go to sleep when you're tired, get up when you're rested." That's the only proper universal rule. When you're rested you'll awake. In fact, you couldn't sleep any more—just then—even if you wanted to. And, have no fear of injuring your health by oversleeping. No one yet ever got too much good natural sleep or did his health any harm by staying in bed until he felt rested. But, if you don't feel rested, there's a cause for it. Either there's something wrong with your bed, or you're not getting oxygen enough—your bed-room is stuffy or ill-ventilated—or you are anemic, rundown, and debilitated, and should see a doctor.

To spend more energy, especially nervous energy, in a day than you can restore in a night's sleep, is, to be headed for physical bankruptcy. Even the loss of one night's sleep affects the nervous systems of many. It causes sleepiness and mental irritability. Food does not digest so well. There is a general lack of "punch" that usually takes

more than a good night's sleep to build back.

Modern conditions, with their anxieties, cares, and hurries, are causing much nervous instability—directly traceable to lack of proper sleep. Never before was there a time when people needed to sleep so long and so "hard," in order to build up vitality wasted in our intensive methods of living, than right now.

The man who continually loses in the quantity or quality of the sleep he requires is laboring under a handicap that will diminish his chances of success in life. The woman who habitually is disturbed in her rest and in its duration will make a failure of her family.

Get all the sound, restful, refreshing sleep you can in a bed that invites repose and relaxation, preferably made of metal, and best to be used only by one sleeper at a time. For, the principles of hygiene are best served when every individual has a bed to himself. Personal contact interrupts the function of sleep. Sleep then is never so restful, because the restlessness of either of the sleepers is communicated to the other. It "lightens" their sleep and retards the building-up process. Then, also, everyone knows how infections—such as colds, sore throat, and coughs—are communicated by sleeping in the same bed with one so afflicted.

The constant exchange of magnetism with one who shares a bed tends also to create apathy and a distaste for contact—and something of the elusive charm and mystery of sex-alooftness is brutalized or

lost thereby. For children to sleep with the aged—to whom they constantly lose magnetism and vital force—is a crime against the child. The facts of such loss are admitted by every competent medical man—the principle has been recognized from time immemorial. The Bible mentions the ancient King David, to whom was given a youth, to supply him with vitality. Only thirty years ago, certain institutions, founded upon the same principles, existed in France. Young girls and boys were supplied to old women and old men as bed-fellows. Almost without exception these young folks lost in vitality—some actually sickening. The evil effects of this strange sale of life-force were so marked that the institutions were finally closed by police order. This same loss in vitality is responsible for much of the nervousness, irritability and weakness that affects American women—for the reasons just mentioned.

And, while fortunately such accidents occur infrequently, many instances are known in which mothers, during sleep, have rolled over upon their babies or young children and smothered them. Such an accident is liable to occur any time, to any mother who sleeps in the same bed with her child.

So, separate metal beds for every sleeper are as necessary as are separate dishes for every eater. They promote comfort, cleanliness, and the natural delicacy that exists among human beings. Sleep becomes more relaxing and, therefore, more reconstructive—next to consciousness itself, the most wonderful and healthful thing in life.

Some Statistical Notes on Tuberculosis*

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

IT IS impossible to make a statistical study of the incidence and mortality of tuberculosis over an extended area of the United States for any considerable period of time—because of the absence of reliable vital statistics. Up to the year 1910, the registration area included only eighteen of the forty-six states of the Union.

Statistics have suffered in reputation, because of the seeming truth of the trite statement that you can prove anything by

figures. In reality, figures are but evidence upon which conclusions may be based.

Statistics are derived from the collection, and numerical classification of observations relating to certain facts or events. In the making of statistics, the first and essential step is, the recording of observations. After the observations have been noted, a numerical compilation of their frequency or of the frequency of certain of their conditions or attributes is possible.

The derived statistics, being but a numerical classification or analysis of the re-

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corded events, depend for their usefulness primarily upon the accuracy of the original records of all the facts. They depend, secondarily, upon the accuracy of statistical classification and compilation.

Sources of error are not few—mortality rates secured by lax enforcement or faulty methods of registration cannot be properly compared with those based upon complete registration. The most common error entering into death registration and, therefore, into mortality statistics is in connection with the statement of the cause of death—which may be a mistaken diagnosis, a desire to avoid giving the correct cause of death or other misstatement.

It is quite safe to assume that in medical practice at large the percentages of correct diagnoses would be found to be even lower than those found by Cabot, whose cases were studied as hospital-cases under conditions assumed to be most favorable for correct diagnosis. (Richard C. Cabot, in *J. A. M. A.*, Dec. 28, 1912, p. 2295.) In 3000 necropsies, Cabot found that the percentage of correct diagnosis in various diseases was as follows: active phthisis, 59 percent; miliary tuberculosis 52 percent; chronic myocarditis, 22 percent; acute nephritis, 16 percent; diabetes mellitus, 95 percent; typhoid fever, 92 percent; lobar pneumonia, 74 percent.

Tuberculosis in the United States

Tuberculosis is one of the most curable of chronic diseases. According to recent teachings, we all have a little tuberculosis. This little tuberculosis, however, in sixty percent or more of the community results only in a beneficent immunity, and it does not, by any means, lead to a fatal issue in all of the remaining forty percent. Those that die of tuberculosis are largely the weaklings, the men of poor development, the dissipated.

Army

According to Bushnell—the results of the examination of the entire army of the United States for tuberculosis—a total of 800,000 men, at the time, showed the number of cases detected as somewhat less than 1 percent of the total number examined. Each tuberculous patient returned from Europe will cost the government about \$5,000, and it is a conservative estimate that the tuberculous soldier who never

leaves this country will cost on an average \$1,000, including pension. If these 7,000 probable cases are detected and if they are all eliminated from the army before they may justly claim pensions as the result of their army service, the saving to the government will be at least \$7,000,000. ("Lessons from the War as to Tuberculosis," by Geo. E. Bushnell, M. D., Colonel U. S. Army, *J. A. M. A.*, March 9, 1918).

The Immigration Exclusion Act applying to tuberculous individuals took effect in 1907. This prevents the entrance into the country of aliens presenting obvious symptoms of the disease, and provides for deportation of any who manifest tuberculosis within three years after their arrival. Incomplete as they are, the mortality statistics of the census form the only source of information in regard to the actual prevalence of tuberculosis (and other diseases) in the United States or any considerable portion of it.

For a general examination of the occurrence of tuberculosis, even as restricted to the states of the registration area, it is, therefore, necessary to resort to the compilations made by the Bureau of the Census, which present the data with absolute uniformity so far as method of compilation is concerned, and with all of the accuracy that is obtainable from the original returns. Tuberculosis does not, as a rule, show very marked fluctuations from year to year, and, so, the statistics given for several years back may be taken equally with those for the present as representing existing conditions, with some exceptions. One can not state the total number of deaths in the United States from tuberculosis; but, from a study of various tables, one could state that 150,000 to 200,000 deaths are occurring each year from this disease. For the year 1907, in the then registration area with an estimated population of 41,500,000, or 48 percent of the total population of continental United States at that time—76,650 deaths from various forms of tuberculosis were reported.

Race

The mortality of the colored population is much higher from this disease than that of the white population. The Negro death rate from tuberculosis of the lungs is markedly higher than the white death rate,

not only in cities, but, also in rural districts.

Indians: During 1915, 35.08 percent of all deaths among our Indian population was due to tuberculosis.

The death rate of the total white and colored population of the registration area from tuberculosis of lungs was 158.9 per 100,000 for the year 1917. The death rate of the colored population of rural Maryland is 230.2 per 100,000. It could be fairly stated in 1907 about 190,000 deaths occurred in the United States from tuberculosis or from causes that might be considered or probably were tuberculosis. In 1900, the colored death rate from pulmonary tuberculosis (from the registration area of 1900) was 490.6 per 100,000 of colored population. The white death rate was 173.5. Thus the Negro rate was 182 percent higher.

Decrease of Tuberculosis

For many years, tuberculosis has been decreasing more or less steadily, both in its absolute and in its relative importance, as a cause of death.

The death rate per 100,000 of population from all forms of tuberculosis declined, in the registration area of the United States, from 1880 to 1907.

	Death Rate	Percent of Decrease
1880	326.2	
1890	267.4	18.0
1900	201.2	24.8
1907	183.6	8.7

The decline has been especially marked in Massachusetts. In that state, for the period 1851-1860, over a fourth of the deaths at all ages (257.5 per 1000) were from tuberculosis, while from 1901 to 1906 less than one-seventh (131 per 1000) were from this cause.

The annual average death rate of the United States is 169.9 per 100,000 population for the years 1901 to 1905. That of Austria, 334.8; Germany, 185.8; Italy, 114.9; Japan, 146.3; Servia, 279.7; Netherlands, 133.4.

Forms of Tuberculosis

In the registration area of the United States, for the year 1907, the number of deaths from all forms of tuberculosis was 76,650, namely:

Tuberculosis of the lungs.....	66,374
Tuberculosis of larynx.....	690
Tuberculous meningitis.....	4,062
Abdominal tuberculosis.....	2,629
Tuberculous abscess.....	65

Pott's disease.....	594
White swelling.....	269
Tuberculosis of other organs.....	713
General tuberculosis.....	1,254

Nearly 90 percent of all of the deaths from tuberculosis are due to tuberculosis of the lungs.

Sex

During 1900, the death rate of males from tuberculosis of the lungs was 188.4 per 100,000 population, while the corresponding death rate of females was only 163.3. The mortality of males exceeded that of females from this disease by 15.4 per 100,000. This difference has begun to be noticed during the past ten or twenty years and may be due to a progressive tendency among women to live more in the open air than formerly; then, again, tuberculosis affects nutrition, and women are, perhaps, more resistant to conditions affecting nutrition than are men. According to Sir J. A. Baines, in India, "women appear to succumb to famine less than the other sex."

States with a large proportion of urban population will tend to have higher death rates from tuberculosis of the lungs than those chiefly rural in constitution. Thus in 1907, the rates for New York (171.6), New Jersey (170.6), and Rhode Island (163.6) exceeded those for Indiana (140.2), Maine (134.3), and Michigan (88.7).

Age

Approximately 28 percent of the deaths from tuberculosis of the lungs occur between the ages of 25 to 34 years; 21 percent between 15 to 24 years; and 20 percent between 35 to 44 years. Over two-thirds (67.4) of the deaths from tuberculous meningitis are those of children under 5 years of age.

Tuberculosis kills men and women chiefly in the most active, most productive period of life, when their work is worth the most to themselves, to their families, and to the world. Nearly a third (33.2 percent) of all of the deaths (male and female) between 15 and 29 years of age are due to tuberculosis in some of its forms; 38.3 percent of all deaths for females between 15 and 29 years are due to some form of tuberculosis. In *Collier's* for July 25, 1908, (in an editorial, "Expressed in Money"), Hunter has estimated the average cost of pre-

paring a man for usefulness at \$1,500. If we could master tuberculosis, the saving in money to the United States would be \$330,000,000 per year.

In an article in *The Maryland Medical Journal* for February, 1904, Frederick L. Hoffman, of the Prudential Life Insurance Company, says that tuberculosis causes annually more than 150,000 deaths in the United States, at the average age of 35 years; and that there is a real loss of life, measured in time, represented by 4,800,000 years per annum (at the age of 35 the normal after lifetime being about 32 years). The money value—the loss—may be estimated as over \$240,000,000 per annum, according to a pamphlet issued by the Department of Commerce and Labor, 1908, on tuberculosis in the United States. The approximate average age at death of the persons dying from pulmonary tuberculosis in the United States is practically about 35 years, also, of 42,734 deaths of males from all forms of tuberculosis in 1907 (in the registration area), 28.2 percent were at ages 15 to 29 years (inclusive); 14,423, or 33.8 percent, at 30 to 44; 9,679, or 22.6 percent, at 45 to 64 years. That is, from 15 to 44 years (the younger and probably most efficient period of industrial activity), there occurred 61.9 percent (nearly two-thirds), 26,458, of all the male deaths from tuberculosis.

Conjugal Conditions

The lowest rate was that of married women aged 45 to 64; the highest death rate from pulmonary tuberculosis was that of widowers aged from 15 to 44 years. The death rate of unmarried males aged 15 years or over, from tuberculosis of lungs, was considerably higher than that of unmarried females of the same ages. The death rates of married males and married females were about the same—according to census mortality statistics of 1900. The widowed (465) male rate considerably exceeded that of the female (235).

Occupation

The highest death rates from pulmonary tuberculosis per 100,000 (in 1900) were, that of marble-and-stone cutters (540.5), followed by that of cigarmakers and tobacco-workers (476.97), compositors, clerks, copyists (398). Laborers (not agricultural) showed a high rate (370.7), but, farmers, planters, and farm-laborers had one of the lowest rates for males in the list (111.7).

Pharmacists have a high rate (over 300). Doctors and surgeons have about 150; bankers, brokers, etc., have the lowest rate, namely, 100. Clergymen, 120.

Among females, servants give the highest death rate (319.7); followed by telegraph- and telephone-operators (205), bookkeepers and clerks (198), nurses and midwives (100.2), school-teachers, 126.1, and the lowest rate by laundresses (94.4).

All occupied males, 236.7. All occupied females, 172.8.

States and Cities

New Jersey: This state was the second state in the Union to collect and record vital statistics, and the records are very complete since 1879. They show a decline in the tuberculosis death rate, though to a much less degree than is the case in Massachusetts. The State Sanatorium, at Glen Gardner, was established in 1907. In New Jersey, the mortality has been steadily diminishing during the past twenty years. This is mainly due to the hygienic revolution which has occurred within that period. In the thirty-one years from 1879-1910, there were 105,200 deaths from consumption, and 60,040 deaths from typhoid fever, scarlet-fever, puerperal fever, whooping-cough, measles, malarial fever, erysipelas, acute rheumatism, and smallpox all combined. The average annual death rate from all causes per 10,000 for thirty-one years was 175.1. The average annual death rate from consumption per 10,000 was 20.96. In 1879, there were 20,444 deaths in New Jersey—2,788 due to consumption—out of a population of 1,020,584. The percentage of deaths from tuberculosis was 27.32 in 1879. In 1909 there were 36,359 total deaths; deaths from tuberculosis were 3,608. Proportion of deaths from tuberculosis to total number of deaths was 9.92 percent. Deaths from tuberculosis per 10,000 population were 15.34, out of a population of 2,352,522. A reduction from 27.3 (1879) to 15.34 (1909) has, therefore occurred in New Jersey during thirty-one years.

New York City: In 1881, with a population of less than 1,250,000, New York had a phthisis death rate of 4.27 per 1,000 inhabitants. In 1910, with a population of more than 4,800,000, the phthisis death rate has been reduced to 1.8 per 1,000 inhabitants—a decline in the death rate of tuberculosis of more than 30 percent.

So far as the municipal control of tuber-

culosis is concerned, New York City stands as a world model.*

Massachusetts: This state has kept satisfactory records since 1842. From these records it is learned that the phthisis death rate has fallen more than 54 percent since 1850. The relation between segregation and other state sanitary measures and a declining phthisis death rate is well illustrated by Massachusetts records (and also by those of Germany and Denmark). Massachusetts was the first state in the Union and the first government in the world to establish a state institution for the exclusive care and treatment of tuberculosis. In the three years of 1913, 1914 and 1915, there occurred 12,545 deaths in Massachusetts, due to pulmonary tuberculosis. Of these deaths, 8,713 occurred between 20 and 49 years of age; or, over two-thirds of all phthisis deaths occurred during this most active period of life; 6,371, or over fifty percent, occurred between 20 and 31 years of age.

California: In California, no less than 15 percent of all deaths that occurred during 1907 were from tuberculosis. In Colorado, even more, being 16.4 percent. In Michigan, only 7.4 percent of all deaths were due to tuberculosis, Vermont, 8.1 percent, New Hampshire, 7.6 percent. But, we must remember that consumptives go from New Hampshire, Vermont and Michigan to California and Colorado, and their deaths are charged up against these states. These deaths should be charged back to the states in which the disease originated.

Other Countries

In Ireland, there has been an increase in the phthisis death rate of 18 percent since 1866.

In Scotland, the death rate of phthisis has declined 4.3 percent (according to Herbert Maxon King).

In Germany, there has been a decided fall in the death rate of tuberculosis during more recent years. Germany is the home of the sanatorium. In 1909 alone, insurance institutions provided sanatorium treatment for 42,232 tuberculous patients.

*A very striking example of the effect of destroying a slum district was noted after the great fire in San Francisco. Prior to 1905, the death rate from tuberculosis in that city was 274 per 100,000; two years later it had fallen to 179 per 100,000, and in 1912 to 153 per 100,000. The death rate fell from 4 per 1000 to 1.9 per 1000 in Liverpool—where the government tore down insanitary dwellings and large sections of "slum" houses.

Denmark has always had a comparatively low death rate from tuberculosis. From 1903 to 1907, inclusive, the mortality from all forms of tuberculosis was only 2 per 1000, and from pulmonary tuberculosis only 1.5 per 100. Preventive measures are conspicuously directed to the control of animal-tuberculosis and the prevention of infection from animal sources. These precautions followed (naturally) upon Bang's demonstration that by means of the tuberculin test and isolation of infected cattle animal-tuberculosis could practically be exterminated. Numerous other sanitary measures were enforced in Denmark. No person with open pulmonary or laryngeal tuberculosis is eligible for a situation in the public service, and similar employment.

In England, in 1906, the urban counties showed a death rate from phthisis of 149.3 per 100,000 of population; while the corresponding rate for rural counties was 129.2, the excess of urban mortality being 15.6 per 100,000 living.

Decline in Tuberculosis Mortality Rate

From tables made by Dr. Frederick L. Hoffman, statistician of the Prudential Life Insurance Company, it appears that the actual reduction in the phthisis death rate has been about fifty percent from 1881 to 1910.

Vienna: From 6.85, to 2.74, or, a decline of about sixty percent.

Budapest: From 7.15, to 3.40, or, 52.4 percent.

Paris: An exception—from 4.41, to 3.74, or, only, 15.2 percent.

London: From 2.22, to 1.32, or, 40.5 percent.

During the five years ending 1910, the mortality of Copenhagen, from tuberculosis was 1.36 per 1000; of London, 1.32; of The Hague, 1.24. New York City shows a decline, from 3.98, to 1.97, or, 50.5 percent.

Tuberculosis Among Soldiers

Early in the war, it was reported, on the authority of Landouzy, that during the first year of the war 86,000 soldiers were discharged from the French army on account of tuberculosis. This, however, was later shown to be an exaggeration, because under careful observation it appeared that less than fifty percent of these 86,000 are now officially recognized to have tuberculosis. Major Rist believes that less than twenty percent of these 86,000 are really

tuberculous. The old saying is: "Give a dog a bad name, and it is hard for it to lose it," so, a diagnosis of tuberculosis once made for a given patient is likely to be sustained. The self-distrustful physician may think the diagnosis to have been made by one of diagnostic ability superior to his own and be afraid to say that such a person does not have tuberculosis.

Blumel, in Germany, has reported that, of cases supposed to require sanatorium treatment examined by him, less than 20 percent had active tuberculosis. Major Rist, of the French army, examined the men sent back from the front with a diagnosis of tuberculosis and found the disease present in less than 20 percent of the cases. ("Tuberculosis Among Soldiers," by E. Sergeant, in *Presse Médicale*, Jan. 3, 1918.) Sergeant reported a year ago that 15 percent of the soldiers sent to him, to confirm the diagnosis of tuberculosis proved to be clinically free from it. This proportion has increased since then to 35 percent.

In another large group, there were men with signs of tuberculosis, but, no tubercle-bacilli could be found in the sputum; and he urges that those in this class should be reexamined at intervals. Some get free of all the symptoms, but, others finally show the bacilli in the sputum.

Examinations of candidates for tuberculosis at the second Plattsburg training camp, showed the following results (A. P. Francine, J. W. Rice, Francis B. Trudeau, *J. A. M. A.*, Dec. 22, 1917):

Number of candidates in reserve officers' training camp examined, 3,134. Accepted, 3,121—99.58 percent. Disqualified because of tuberculosis, 8, or 0.255 percent. Healed lesion reported and passed for active service, 3, or 0.095 percent. Recommended for special service, 2, or 0.064 percent. Found to be tuberculous, 13, or 0.414 percent.

Examinations of Regulars

Enlisted men examined, 584. Accepted, 578, or 98.97 percent. Disqualified because of tuberculosis, 5, or 0.85 percent. Special service, 1, or 0.17 percent. Found to have tuberculosis, 6, or 1.027 percent.

The number of cases of tuberculosis was twice as high (1.027 percent) among the regulars as among the candidates for officers' commissions (0.41 percent).

Increase of Tuberculosis Because of the War

Fishberg states that it has been shown

that there are 100,000 tuberculous ex-soldiers in France at present. We must consider, however, that 6,000,000 or more soldiers have been engaged in this war fighting in France. He believes that he is safe in concluding that tuberculosis is not more likely to occur in soldiers during active warfare than in civil life. (Maurice Fishberg, M. D., in *J. A. M. A.*, June 16, 1917, "Tuberculosis and War.")

Figures published by Renon, in *Paris Médical* (1916), show clearly that tuberculosis has not increased among the civil population of France since the war began. Despite the large number of tuberculous soldiers in the European armies, cases of tuberculosis-infection acquired while serving during the present war have been nil. The reason is: most adults have been infected with tubercle-bacilli during childhood and have thus been immunized against exogenous reinfection with the same virus, so that they are just as safe in the army as in civil life. In the vast majority of cases of tuberculosis discovered among soldiers, it was ascertained that they had been affected with the disease before enlistment. Reactivation of old dormant lesions may occur in civil life, and does not occur any more often in military life. Records show that no previous war has increased the tuberculosis mortality and morbidity.

Reiche (*Ztschr. f. Tuberk.*, 1915, 24), in Hamburg, has shown that no increase in the tuberculosis mortality occurred during and after the Franco-Prussian war of 1870-71. The same was true in the United States after the Civil War. From observations of German soldiers during the present war, S. Schroeder (*Ztschr. f. Tuberk.*, 1915, 24), emphasizes that exposure to tubercle-bacilli plays no significant role in the causation of active tuberculosis in the German army. He has not seen a case of primary tuberculosis acquired in the campaign. The same has been recorded for the English and Russian armies. At any rate, it is certain that tuberculosis is no more liable to develop in soldiers than in the civil population.

August Predæhl (*Ztschr. f. Tuberk.*, 1915, 24), before the Medical Society of Hamburg, Germany, as the historian of tuberculosis, stated that he found that tuberculosis has not increased among the soldiers in active service. Among 5,000

medical and surgical patients treated in the military hospital under his care, only 18 showed symptoms and signs of active tuberculosis. In another hospital, Kassman encountered only 17 tuberculous patients among 3,000 soldiers.

In Russia, V. W. Sauvin (*Russk. Vrach*, 1917, 16. 26), having under his care 100,000 sick and wounded soldiers in the military hospital of Moscow, found that among 26,524 medical cases there were 955 cases of pulmonary tuberculosis. Pulmonary tuberculosis was thus found in 3 percent of the cases. How unlikely tuberculosis is to develop in soldiers on active duty, is clear when the rarity of surgical tuberculosis in wounded and injured soldiers is considered. It is extremely rare for tuberculous disease of the bones and joints to follow injuries

among soldiers, whereas it frequently follows in the wake of injuries in civil life.

In conclusion, I wish to quote Osler ("The Tuberculous Soldier," *Lancet*, London, 1916, II, 220), who stated that, of 1,000,000 enlisted men between the ages of 18 and 40, the proportion to develop tuberculosis is probably much smaller than if these men had remained in civil life. The circumstances of the soldier's life, as a rule, do not weaken, but, strengthen the body's resistance. The Osler prediction was correct. Osler tersely states that "in a majority of cases the germ enlists with the soldier." (*Lancet*, 1916, II, 220). He believes, with other observers, that those of the soldiers who show signs of tuberculosis during their army life have had the disease prior to entering the campaign.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[Continued from July issue, page 520]

Heart—Life—Mind—Soul—The Riddle of the Universe

Mind, that dual mind—our subjective and the objective consciousness, immortal essence and mortal intelligence—is all there is in heaven or on earth—life—death—and soul that cannot die! The lofty soaring mind, that fills and encompasses the universe and all eternity with the thoughtfulness of one infinitesimal second, tells the wondrous story over anew; the inscrutable reverberation of all time, that appals the understanding and imbues the solar plexus of the brain with a pious proneness. That astounding sweep of illimitable immensity which the deep scrutiny of the prying mind pervades would dethrone is rational equilibrium, were not the mind an indestructible essence of immortality, that may be grieved, but cannot be subdued nor annihilated.

Poetry, philosophy, religion spoken in hyperboles and grand language about the feelings, the sentiment, the emotions of the heart—ignoring, if not ignorant of it, the masterful fact that the heart is a powerful pumping-machine that is as insensible to the ecstasy of joy, the rapture of love, the sadness of disappointment or the agony of

torture as the liver or the stomach might be. But, the electric sympathy of the mind flings off the debris of acute anatomical disturbances, through the medium of the heart, the chamber of the objective mind, vibrating the conflicting emotions focused in that sensitive haunt of mortality through the grand central nerve-system, reacting on the heart.

Yet, nothing of all this originates in the heart, but must emanate from the objective mind. The heart has no mind nor function other than the vitalizing one of sending the blood pulsating through the system, obedient to the thrilling throbs of the grand engine of life. When the mind is quiet and at rest, the heart is tranquilly at work. Pleasing objects enter the mind through the retina of sight, while oral tidings find a portal in the sense of hearing, and written or printed communications pass the eye, to find audience in the mind, whence any impression that may react on the heart must traverse the nerve connections with that great organ. Great and wondrous peril or some violent shock sometimes convulses the whole anatomical system, and the heart pulsates furiously, while the mind is almost dethroned. But it is the mind that realizes

or feels the danger and sends the alarm thrilling throughout the nervous mechanism, before which the heart was indifferently at work, realizing nothing eventful till the mind started the reaction with electric speed.

I know this to be true, because I have studied and proved it to a crucial finish in my own personality, fortified by the watchful experience of many years of a long life.

I am as incapable of slandering the heart as any poet or divine ever was, and concede that the moment the heart stops the objective mind is negative. My theme is "mind", and I do not want that the heart shall usurp any element that legitimately appertains to the mind.

The mind is the irrefragable leverage upon which the world depends for emancipation from ignorance and slavery, vice, and disease, the curse of earth, the bane of man. Mind, in the weird shadow of midnight-lamps, ushered the wonders of this progressive age into the light of day, to bless suffering humanity.

The heart does not think and is incapable of any intelligent expression. We read and hear much about tenderness and hardness of heart, which translates to generosity or callousness of mind. If the mind is sympathetic and sensitively feels for human misery, that beautiful sentiment is attributed to tenderness and goodness of heart. When the mind is indifferent and morbid, the heart is said to be hard and bad. The scriptures overflow with beautiful songs about the heart; and that subtle organ has ever been the sweet-scented bouquet of poetry in all times, and languages and lands.

Our civilization, such as it is, our education, our refinement, our polish, our intelligence have been and are the fruitage of mind. Material betterments of the hard and oppressive fortunes of suffering humanity have sprung, as ingots of limpid gold leap from the purifying crucible, from the burning intensity of overwrought minds, striving in the silent night with the guarding custodians of the hoarded mysteries of Virgin Nature, reluctant to yield even the tiniest grain to accursed man, man unworthy, in his depravity, to enjoy the rich bequests wherewith primitive time endowed his life of purity.

But those sleepless sons of science, strangers to the subterfuges of hypocrisy, scorning to imbue their majesty of mind in the degrading vices of circumjacent infamy, arose from scant and frugal suppers, to climb storied stairways to cold and cheerless garrets, where the exigency of cheapness rendered pinching poverty a sterling virtue, there to resume the unequal conflict with the relentless guardians of their yet nameless quests. And these seekers after truth oftentimes become oblivious to their own personality and their inconvenient and comfortless surroundings, until a glint of the morning sun, piercing the crisp and frosty air, faintly steals through a crevice in the broken window-pane, to shame the fading lamplight, arouses them from their absorbing reveries, and thus they have patiently outwatched the stars and vanquished the keepers of the storehouse of mysteries, by becoming their equals in purity of mind.

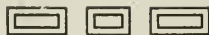
The Boon of Inventive Science

An authority as revered and admired as Thomas A. Edison, whose name, as the centuries pass down the corridors of eternity, will be enshrined in every household-sanctuary has avouched that he knows, nothing of zero weather or the flight of time when he is working on some abstruse problem.

Every little *tienda* (merchandise-store) here has its phonograph whose clear articulation of words in discourse and song is almost incredible to believe, without the incontrovertible evidence of one's senses. Spanish is the language used for these phonograph-records. I have seen the street crowded with poor women and children in front of such a store and they would weep when some sorrowful, pathetic song was reproduced by that wondrous mechanism, and then at once break out in hilarious laughter when some comical record was started.

The freaks of Edison and the crowning triumphs of Marconi—were there not a thousand and one other children of sublime thought—were ample to render mind the palm of transcendental glory, as the majestic conqueror of stubborn nature and the prospective emancipator of man from his woes and sufferings.

[To be continued]



What Others are Doing

TUBERCULOSIS SURVEYS

The *American Review of Tuberculosis*, for June, comments editorially on the present interest in the discovery of unsuspected or concealed tuberculosis by systematic examination of large numbers of people. A survey in 1915-16 by the Michigan Health authorities showed 44 percent of cases clinically tuberculous or potentially such among persons examined because of suspicious symptoms. At Framingham, Mass., the survey still in progress shows fifteen living cases to each death. The selective draft examinations show from 2 percent to 6 percent of cases. Of unique interest is the house to house canvass made at Saranac Lake, a tuberculosis resort. In a community of 5,000 persons only one-fifth of the population settled there for reasons of health and only 441 of these had actual tuberculosis. There were 860 transient residents during the six months' survey.

During 1917, about 1,200 tuberculous visitors reported to the Board of Health. Only sixteen living cases were of indigenous development, and only four of these were among the strictly native born. The writer suggests as an explanation for this very low rate the absence of crowding and industrial conditions, the large opportunity for outdoor invigoration and the generally higher standard of living. The introduction of a few large mills with their accompaniment of hard labor, dust and crowded tenements would, in all probability, soon bring about a higher incidence of tuberculosis.

THE USE OF DICHLORAMINE-T AND THE OPEN-TO-THE-AIR TREATMENT IN BURNS

The sterile scab, which, in his fight against sepsis, Sir Joseph Lister strove to attain as an ideal dressing for superficial wounds, would appear to be the perfect dressing for burns of the second and third

degree; it would also in very large measure fulfil four of the six properties that, according to Stewart, are essentials of any perfect dressing; namely: that it be aseptic or mildly antiseptic; that it provide free drainage; that it will not macerate the tissues; that it will not stick to the tissues; and that it do not require frequent changing. To these requirements, in cases of severe and extensive burns, must be added yet another—that the dressing minimize the abnormal radiation of body-heat from surfaces devoid of the natural protection of skin and subcutaneous tissues.

In *The Therapeutic Gazette* for May, Doctors W. E. Lee and W. H. Furness report on their results in fifty cases of severe burns of the second and third degree treated during the past seven months at several Philadelphia hospitals, in all of which a modified open-to-the-air method was employed. These wounds healed with a surprisingly small degree of infection and a resultant promptness of epithelialization, producing softer scars and less contraction than under any other method.

In treating these cases, the authors secured the advantages of the open-air method as well as the paraffin-wax dressing, by applying over the burns, after cleansing with a 1- or 2-percent solution of dichloramine-T in chlorcosane, some mosquito-netting that had been impregnated in the paraffin-wax mixture known as parresine.

A MODIFIED OPEN-AIR METHOD OF TREATING BURNS

The method of treating burns, which the authors whose experiences were referred to in the preceding abstract employed, is as follows:

The entire burned area and a generous portion of the surrounding skin should be covered with a single layer of open-meshed mosquito-netting impregnated with paraffin wax. This paraffined netting may

be held in place with single layers of a circular turn of gauze bandage or by narrow strips of adhesive plaster applied over the edges of the netting and on the uninjured skin (never across a portion of the burned area!). This paraffined netting, being previously sterilized, furnishes an aseptic covering, while, at the same time, the large meshes provide free drainage for the wound secretions; in other words, it acts in an effective manner as an ideal sterile scab. When the wound secretions are abundant and become thick and dried on the outer side of the net so as to hinder free drainage, the whole dressing may be completely removed—often without causing any pain—by simply lifting the nonadherent paraffined net from the wound surface. Should the paraffined net become occluded so as to adhere to the surface of the burn, then a liberal spraying with sterile paraffin-oil (liquid petrolatum) from an ordinary atomizer always will loosen it.

The final requirement to be met, in order to attain the ideal dressing, is, an antiseptic that will control infection and, yet, not devitalize or even irritate the tissues. It was found that a 1-percent or a 2-percent solution of dichloramine-T in chlorinated melted paraffin wax—"chlorcosane"—according to the method of preparation proposed by Dakin and Dunham, can be used on the burned surfaces without causing the slightest deleterious effect on the tissues or discomfort to the patient, and with a pronounced control of the infection, as indicated by bacteriological counts made from smears of the exudates.

This oily solution can readily and evenly and painlessly be applied in the form of a spray, at ordinary room-temperature, to the entire burned surface before the paraffined net is in place, and at subsequent dressings every twenty-four hours, or through the meshes of the net if there is no necessity of removing it. For ward patients, no additional outer dressing is applied over the paraffined net and the burned parts are exposed to the air as much as possible.

When the burned area is extensive and there is danger of too great radiation of body-heat, the bed-clothing is raised above the injured part on a cradle on which two or three ordinary electric-light bulbs are suspended and kept constantly lighted over

the wound. Whether it is the equable temperature thus maintained or a direct action of the actinic rays, is difficult to say, but, this electric-light bath seems to have, unquestionably, a beneficial effect upon the healing-processes.

If the paraffined netting, which of necessity is somewhat stiff, does not conform readily to the contours of the affected area, it may be cut in short or narrow strips, as the case may be, and the wound thus paved over with it.

INFECTIOUS ENDOCARDITIS

At a meeting of a French medical society (reported in *Paris Médical* for June 8), the heart of a soldier was demonstrated, who had died thirty days after the onset of an infectious endocarditis simulating typhoid fever, but, which had, at first, presented transitory symptoms of meningeal disturbance.

A marked diastolic murmur had made it possible to diagnose its localization at the aortic orifice, the right valve of which, perforated at the base, was transformed into a vegetative mass as large as an almond. There was splenic infection and hepatization of the lower lobe of the right lung; and, toward the end of the malady, serofibrinous pericarditis had set in, as well as hemorrhagic pancreatitis. Smears and sections of the endocardial vegetations disclosed the presence of cocci. Cultures made of blood removed previous to autopsy, in spleen tissue and in blood serum, showed pure cultures of streptococci.

BLEEDING FROM THE LYMPHATICS IN CASES OF CANCER

In a communication to the Academy of Sciences (*Paris Médical*, June 15), Doctor Yves Delage referred to the fact that cancer reoccurs despite every method of treatment that has hitherto been proposed; including, surgical, chemical, radium and x-ray exposure, and so on. He concludes that it is necessary to counteract the cancerous intoxication of the organism and believes that a continued "bleeding" from the lymphatics might lead to a detoxication of the cancerous organism, provided that a suitable technic could be developed.

If a very fine cannula is introduced into large lymphatic vessels, such as those of the thigh or, perhaps, in the large lym-

phatic vein, or into the thoracic canal; or then into the peripheral sinuses of the large ganglia; and if then to this cannula is attached a small-caliber rubber tube and thus a continuous bleeding from the lymph-vessels could be established, the quantity of lymph in this manner abstracted from the body might be restored to the organism by an equal quantity of salt-solution, to be introduced hypodermically.

Unfortunately, Doctor Delage adds, there is a serious uncertainty in this procedure, owing to the difficulty of the operation. Surgeons whom he has consulted have not found it easy, because the lymph-vessels are very small; also, their walls are thin and friable and, moreover, one could not be certain to avoid obstruction, which would necessitate changing the place where the cannula is inserted. However, like many other ideas that seem impossible before having been tried, it may be that this also will pass into practical utilization.

The idea presents nothing that can be rejected as absurd. We have often insisted that cancer, even if localized, is not a circumscribed disease, but, that there is an underlying cancerous condition of the whole organism, a carcinosis, which may or may not give rise to definitely circumscribed and localized cancerous growth.

If, therefore, it is correct that the cancerous products, cancerous cells or whatever they may be, pass through the lymphatics, the idea of draining the lymph-vessels and thereby stimulating a more normal reproduction of lymph, presents nothing impossible, indeed, it has much to commend it. Whether such method is feasible, is another question.

IS PHENOLPHTHALEIN TOXIC?

In a recent number of *Paris Médical*, reference is made to the frequent use of phenolphthalein as a laxative, a remedy that is the principal constituent of several important drug combinations. Since this drug does not exert a laxative action in animals, it has been impossible to determine experimentally its toxic dose. However, a recent observation of Doctor Orland's affords information on this subject.

A sick child, three years old, had swallowed, by mistake, 18 tablets of phenolphthalein containing 10 centigrams each, that is, a total of 1.8 Gram, (about 27 grains)—

a dose that is reasonably large, even for an adult.

The boy, who had been seen soon after, did not present any signs of poisoning. He had several copious dejections, the latter at first being green, but, very rapidly resuming a normal appearance. The only abnormal symptom present was oliguria, which lasted about two days, the quantity of urine eliminated amounting hardly to 100 Grams in twenty-four hours. The elimination of the phenolphthalein through the urine continued for about five days.

It seems, therefore, that the limit of tolerance of phenolphthalein is quite high and that this drug may be utilized for its laxative action without fear.

TAKING STOCK OF SARANAC

F. B. Ames, of Boston, reports on a tuberculosis survey of Saranac Lake, New York, in the June number of the *American Review of Tuberculosis*. The village owes its growth and present standing to its reputation as a health resort for tuberculous patients. A careful house to house canvass was made and all data and tabulations were based on personal interviews. No clinical or laboratory examinations were made to verify the data. The people cooperated frankly and well. The indigenous mortality and morbidity, including the incidence among children, are compared with the results of other similar studies. The report ends with the following conclusions:

About one-fifth of the total population of the district is made up of individuals who went to live there for their health. The number who went for any disease except tuberculosis is negligible. Pulmonary tuberculosis is the most common form of the disease manifested.

Six percent of the tuberculous persons listed in the survey had not been under the care of a local physician since their residence in the district.

Indigenous morbidity and mortality were low, but 0.3 of 1 percent of living cases being found among the native-born and 0.9 of 1 percent among previously healthy residents. This result is in accord with investigations elsewhere, and the conclusion seems justified that there is a minimum danger of infection of healthy adult residents of resorts frequented by tuberculous patients. The more general appli-

cation of this statement is worthy of careful consideration.

A total of 61 percent of negative family histories was obtained. This would indicate that sources of infection are widespread and that absence of direct family history by no means presupposes freedom from adult manifestation of clinical disease.

In families with both parents tuberculous there is more clinical tuberculosis in the children than if only one parent is tuberculous. Incident morbidity is very low among children in the health district.

Educational influences emanating from nearby sanatoria, and locally the "open door" for the tuberculous into unrestricted industrial and social activities, have done much to remove fear and ignorance and to create an intelligent public attitude toward the disease. With this sane attitude existent the problems connected with the control of tuberculosis are becoming less and less difficult of solution.

HEALTH CONDITIONS AMONG IMMIGRANTS

W. L. Rathbun, of Otisville, New York, discusses the tuberculosis problem among our immigrants in the June number of the *American Review of Tuberculosis*. The vital statistics show that the death rate from pulmonary tuberculosis is higher among the foreign-born than among the native-born population. Many immigrants with quiescent or active lesions on arrival exacerbate or progress after landing. The general law must also apply here, that the mortality and morbidity of tuberculosis of a given class is in inverse ratio to its average income. Other factors being equal, the maximum of overcrowding and poorest quality of food are almost sure to be associated with the greatest poverty. Exacerbations are not, under such conditions, the result of superinfection but come from an extension or lighting up of old lesions in the great majority of cases. If these conclusions are correct it would seem very unwise to admit immigrants with definite tuberculosis of the lungs even though quiescent or arrested. Funds for the treatment of tuberculous aliens can be expended to much better advantage in the countries from which they come. The rejection of tuberculous immigrants is to the advantage of colonies of earlier arrivals of their re-

spective kinds, to which the newcomers are apt to gravitate, of advantage to contractors employing unskilled labor extensively in as much as inefficient and dependents will be eliminated, and should enlist the cooperation of charitable agencies interested in the immigrant's own welfare. At present, the physical conditions and the small number of medical examiners make anything like a thorough examination of all immigrants impossible. Only those singled out by rapid inspection as suspicious are given a physical examination;—a system that is obviously unfair to all the rest who have also paid their poll tax of \$4.00 intended to provide this very benefit. Since the poll tax has been collected a surplus of \$9,000,000 in excess of expenditures has accumulated. In 1915, when immigration had decreased very considerably, the percentage of certificates for deaths was 9.24, as contrasted with a percentage of 2.35 in 1914, before the reduction in volume of immigration which made possible the more intensive examination in 1915. At present there is not available sufficient hospital space for strict examinations of all immigrants during heavy receivings. The more rapid method of x-ray examinations would be of assistance in excluding non-tuberculous conditions and in confirming the diagnosis of pulmonary tuberculosis. The nucleus for their work already existing at Ellis Island could be profitably enlarged. The expense of thorough examination would be much less than the subsequent sanatorium care of the tuberculous and the incidental expenditures involved in the question of relapse, the care of families of patients and the burial expense. To prevent mistakes and protect the interest of immigrants, experts in physical examination of tuberculosis should be stationed at large ports of entry and with them should rest the final decision in all suspicious cases. Steamship companies should be fined \$100 for bringing in a tuberculous alien, and be responsible as well for the expenses incident to any necessary detention period and for the alien's deportation if rejected. Cooperation with Canadian authorities is essential, otherwise proper border examination should be arranged for. The needs may be summarized as follows:

1. Reorganized and increased medical staffs with equipment at the various im-

migration stations for a satisfactory minimum physical examination of each immigrant.

2. The medical organizations to include a sufficient number of tuberculosis specialists and trained roentgenologists to carry forward proper examinations for tuberculosis.

3. An educational campaign to inform immigrant associations, steamship companies, and other institutions, of advantage to be derived from the excluding of tuberculous aliens.

TRACHOMA IN KENTUCKY

The estimate published three years ago by the Kentucky State Board of Health, that out of a total population of about 2,400,000 there were 50,000 cases of trachoma, is believed in the office of the U. S. Public Health Service at Washington to be, by no means, an excessive estimate. In a letter of January 23, 1918, Surgeon McMullen, who for several years has been in charge of the federal antitrachoma work in Kentucky, writes, in *The News Letter* for June: "I am of the opinion that the number of cures effected in eastern Kentucky is greater than the new infections. A survey of 24 counties, mostly in the eastern part of the state, made about three years ago, showed that out of 18,000 persons examined 1280 were suffering from trachoma, or about seven percent. During the past three years, between six and seven thousand individual cases of trachoma have been treated, and a large percentage of these have been recorded as cured. Of course, a great many cured cases (patients) of trachoma who live long distances from the hospital never return for inspection, and their history-cards are, therefore, not complete as to the result obtained. It is believed that the three hospitals in the eastern part of the state are effecting a reduction in the number of trachoma-cases in that section. However, it is safe to assume that in the western and other portions of the state where this opportunity for treatment is not present the disease is on the increase.

"The three small hospitals are covering as much ground as possible, but, are inadequate for the entire state, and other hospitals should be established, to cope with

this contagious disease that is so destructive in its effects."

THE CAMPAIGN AGAINST TRACHOMA

According to *The News Letter* for June, of the 280 eye-patients admitted to the Illinois Charitable Eye and Ear Infirmary in 1917, 101 cases of trachoma were treated. The State Department of Public Health and the Department of Public Welfare will cooperate in an effort to stamp out this disease, which prevails in southern Illinois and which has caused a number of soldiers to be returned from the ranks. According to the statistics of the secretary of the Illinois Welfare Commission, trachoma is the leading cause of the high rate of blindness in southern Illinois, and blindness is most prevalent in counties where there are no public nursing systems.

Surgeon John McMullen, U. S. Public Health Service, visits Camp Zachary Taylor, near Louisville, from time to time and examines soldiers for trachoma. Those found to have trachoma are then removed to the U. S. Marine Hospital in Louisville, are operated upon by Surgeon McMullen and are retained in the hospital until they are in condition to return to Camp Taylor. Recently twelve soldiers were operated upon for this affection.

Besides trachomatous soldiers from Camp Taylor, more than twenty trachomatous children of civilians living in the extracantonment zone outside the city limits of Louisville were operated upon in the Marine Hospital in Louisville on April 23. Several physicians from the army and from the U. S. Public Health Service were present at this clinic, conducted by Surgeon McMullen with the cooperation of the health-officer of the county.

PREVENTION OF BLINDNESS

In the illustrated lectures on child-welfare, used in the Illinois baby-saving campaign (*News Letter*, June), the Illinois Society for the Prevention of Blindness provides 11 slides on the prevention of blindness and calls special attention to laws regarding ophthalmia neonatorum and the use of "drops" in the eyes of the newborn.

Whenever and wherever possible, in suburbs and small towns near the city of Chi-

cago and in other sections of the state, the Society gives assistance. During the summer, the Society's work will be carried on throughout the state with the Child-Welfare Department of the State Council of National Defense. It is hoped that by the end of the year, every county will have had its special campaign and literature brought before every community in its respective languages.

THE EXCESSIVE VENEREAL RATE IN OUR ARMY

Before the Chicago Institute of Medicine, last April, Dr. William T. Belfield read a paper (*N. Y. Med. Jour.*, June 15), in which he declared that from 1906 to 1911 the average venereal incidence of the United States regular troops at home was about 150 men per 1,000 per year; while, since the official adoption of the prophylactic treatment in 1912, the venereal rate of our home army has averaged about 90. Even this places the United States regular army at the head of all armies, as regards the frequency of venereal infection; for, prior to the present war, the rate in various foreign armies ranged about as follows: Italian, 77; British, 64; Russian, 63; Austrian, 54; French, 24; Japanese, 24; Prussian, 19; Bavarian, 17.

In discussing the problem, which is: how to decrease this excessive frequency (which, under war conditions, even has increased in all armies), Doctor Belfield offered various suggestions for measures that are in part educational, in part punitive, and, further, prophylactic.

As to the educational measures, it is, of course, necessary to instruct the soldier carefully concerning the disasters, immediate and remote, wrought by venereal disease. Doctor Belfield points out, however, the absolute necessity that in all matters concerning the health of troops the medical officer should have supreme control. Only if he is endowed with sufficient au-

thority can he insist upon measures and precautions calculated to diminish the venereal rate among the men, and to enforce prophylactic treatment whenever exposure shall have taken place.

Incidentally, the author raised another potent reason in support of the bills now before congress, known as the Owen and the Dyer bills, which provide for increased rank for medical officers, not only of the regular army, but, also of the Medical-Reserve Corps.

It being definitely established that continence is entirely harmless and, in fact, beneficial to the health of the young male of the human species, the disability for military duty, owing to venereal infection should be made a cause for punishment. This can be done in various ways, and especially by educational measures, through which venereal diseases resulting from the soldier's voluntary act no longer can be explained away by the childish plea that he "didn't know it was loaded."

As to the prophylactic treatment, it has been determined by rather extended experience that this has been completely successful if properly employed within an hour after exposure, although it often has failed when used four or more hours thereafter. It is suggested that soldiers be instructed in the immediate employment of prophylactic treatment and that neglect to utilize it shall be cause for punishment.

In the efforts to reduce the excessive frequency of venereal disease among our soldiers, the government's firm and intelligent handling of the liquor-question will be an important factor, since it is well known, and generally conceded, that venereal infection is more often acquired by men under the influence of alcoholics than at other times. It is to be hoped that the government will make use of this present opportunity to handle the venereal problem with equal firmness and intelligence, the benefits whereof would accrue, not only to the the soldiers themselves, but, to the nation at large.



Miscellaneous Articles

Studies on Food Economies

XV.—About Starch

THE starch, which we take so abundantly as food, appears to have no more food-value to us than to the vegetable germ until the conversion into dextrin or sugar is effected.

From what I already have stated concerning the action of heat upon starch, it is evident that this conversion is more or less effected in some processes of cookery.

In the baking of bread, an incipient conversion probably occurs throughout the loaf, while in the crust it is carried so far as completely to change most of the starch into dextrin and some into sugar and caramel.

Those of us who can remember our bread-and-milk may not have forgotten the gummy character of the crust when soaked. This may be felt by simply moistening a piece of crust in hot water and rubbing it between the fingers. A certain degree of sweetness may also be detected, though disguised by the bitterness of the caramel, which also is there.

The final conversion of starch food into dextrin and sugar is effected in the course of digestion, especially, as already stated, in the first stage—that of insalivation.

Saliva contains a kind of diastase, which has received the name of salivary diastase and mucin. It does not appear to be exactly the same substance as vegetable diastase, though its action is similar. It is more abundantly secreted by herbivorous animals, especially by ruminating animals. It is comparatively deficient in carnivorous animals, shown by the fact that, if vegetable matter is mixed with their food, starch passes through their intestines unaltered.

Some time is required for the conversion of the starch by this animal diastase, and in some animals there is a special laboratory,

or kitchen, for effecting this preliminary cookery of vegetable food.

Ruminating animals have a special stomach-cavity for this purpose, in which the food, after mastication, is held for some time and kept warm before passing into the cavity that secretes the gastric juice. The crop of the grain-eating birds appears to perform a similar function. It is there mixed with a secretion corresponding to saliva, and is thus partially malted—in this case, before mastication in the gizzard.

At a later stage of digestion, the starch that has escaped conversion by the saliva is again subjected to the action of animal diastase contained in the pancreatic juice, which is very similar to saliva.

It is a fair inference from these facts that we, creatures who are not provided with a crop or compound stomach and manifestly secrete less saliva than horses or other grain-munching animals, require some preliminary assistance when we adopt graminivorous habits; and one part of the business of cookery is, to supply such preliminary treatment to the oats, barley, wheat, maize, peas, beans and others that we cultivate and use for food.

It may be added that the stomach itself appears to do very little, possibly nothing, toward the digestion of starch. The primary conversion into dextrin is effected by the saliva, and the subsequent digestion of this takes place in the duodenum and following portions of the intestinal canal.

This applies equally to the less easily digested material of the vegetable tissue described in the preceding chapter. Hence, the greater length of the intestinal canal in herbivorous animals as compared with the carnivora.

Having described the changes effected by heat upon starch, and referred to its

further conversion into dextrin and sugar, we will now take some practical examples of the cookery of starch foods, beginning with those that are composed of pure or nearly pure starch; namely, arrowroot, tapioca, sago and potatoes.

When arrowroot is merely stirred in cold water, it sinks to the bottom undissolved and unaltered. When cooked in the usual manner so as to form the well-known mucilaginous or jelly-like food, the change is a simple case of the swelling and breaking up of the granules already described as occurring in water at the temperature of 140 degrees F. There appears to be no reason for limiting the temperature, as the same action takes place from 140 degrees and upward to the boiling-point of water.

I may here mention a peculiarity of another form of nearly pure starch food, namely, tapioca, which is obtained by pulping and washing out the starch granules of the root of the manihot, then heating the washed starch in pans and stirring it, while hot, until ready. This cooks and breaks up the granules and agglutinates the starch into nodules which, as explained by James Collins, are thereby coated with dextrin. It is to this gummy coating to which some of the peculiarities of tapioca pudding are attributable and which gives it its characteristic cohesion.

Incidentally, it is a curious fact that this manihot root, from which our harmless tapioca is obtained, is terribly poisonous. The plant is one of the large family of nauseous spudgeworts (*euphorbiacæ*). The poison, hyoscyamine, resides in the milky juice surrounding the starch granules, but, being both soluble in water and volatile, most of it is washed away in separating the starch granules, while any that remains after washing is driven off by the heating and stirring, which has to reach 240 degrees F. in order to effect the changes described. It is reasonable to suspect that the difference between the forms of tapioca and arrowroot has arisen from the necessity of thus driving off the last traces of the poison, with which the aboriginal producers are so well acquainted as to combine the industry of poisoning their arrows with that of extracting the starch food from the same root. No certificate from the public analyst is demanded to establish the absence of the poison from any given sample of tapioca, as the juice of the

manihot root, like that of other spurge, is unmistakably acrid and nauseous.

Sago, which is a starch obtained from the pith of the stem of the sago-palm and other plants, is prepared in grains in the manner of tapioca, with similar results. Both sago and tapioca contain a little gluten and, therefore, have slightly more food-value than has arrowroot.

The most familiar of our starch foods is the potato; and it well may be placed first among the starch foods; for, starch is its prevailing constituent, as the average composition shows: water, 75 percent; starch, 18.8; nitrogenous material, 2; sugar, 3; fat, 0.2; mineral salts, 1. The salts vary considerably, though, with the kind and the age of the potato, from 0.8 to 1.3 percent in fullgrown tubers, while young potatoes contain more.

In boiling potatoes, the change effected appears to be simply a breaking up or bursting of the starch granules and a conversion of the nitrogenous gluten into a more soluble form, probably by a certain degree of hydration.

As we all know, there is a great difference among potatoes; some are waxy, others are floury; and these, again, vary according to the manner and degree of cooking. I can not find any published account of the chemistry of these differences, and must, therefore, endeavor to explain them in my own way.

As an experiment, take two potatoes of the floury kind; boil or steam them together until they are just softened throughout; or, as we say, "well done." Now leave one of them in the saucepan or steamer and very much overcook it. Its floury character will have disappeared and it will have become soft and gummy. The reader can explain this by simply remembering what has already been explained concerning the formation of dextrin. It is because of the conversion of some of the starch into dextrin.

My explanation of the difference between the waxy and the floury potato is, that the latter is so constituted that all the starch granules may be disintegrated by heat in the manner already described before any considerable proportion of the starch is converted into dextrin, while the starch of the waxy potato, for some reason, probably a larger supply of diastase, is so much more readily convertible into dextrin that a considerable proportion becomes gummy

before the whole of the granules are broken up, that is, before the potato is cooked or softened throughout. Potatoes much sprouted have developed more diastase, hence, are more waxy.

I must here throw myself into the great controversy of "jackets or no jackets." Should potatoes be peeled before cooking or should they be boiled in their jackets?

I say, most decidedly, in jackets, and will state my reasons. From 55 to 56 per cent of the above-stated saline constituents of the potato is potash and potash is an important constituent of blood—so important that in Norway, where scurvy once prevailed very seriously, this has been banished since the introduction of the potato; and, according to Lang and other good authorities, this is owing to the use of potatoes by a people who formerly were insufficiently supplied with saline vegetable food.

Potassium salts are freely soluble in water, and I find that the water in which potatoes have been boiled contains potassium; as may be proved by boiling it down to concentrate, filtering, and then adding the usual potassium-test—platinum chloride.

It is evident that the skin of the potato must resist this passage of the potassium salts into the water, though it may not fully prevent it.

I have already said that the practice of using the digestive apparatus of sheep, oxen, and other herbivores for the preparation of our food is merely a transitory barbarism, to be ultimately superseded by scientific cookery by preparing vegetables in such a manner that they will be as easily digested as the "prepared grass" that we call beef and mutton.

I do not mean by this that the vegetable we should use must be grass itself or that grass should be one of the vegetables. We must, for our requirements, select vegetables that contain as much nutriment in a given bulk as does our present mixed diet; however, in doing so, we encounter the serious difficulty of finding that the readily soluble cell-wall or main bulk of animal food, the gelatin, is replaced in the vegetable by the cellulose, or woody fiber, which not only is more difficult of solution, but, is not nitrogenous, being merely a compound of carbon, oxygen and hydrogen.

Next to the enveloping tissue, the most abundant constituent of the vegetables we use as food is starch. Laundry associations

may render the Latin name "fecula" or "farina" more agreeable to us when applied to food.

We feed very largely on starch, and take it in a multitude of forms. Excluding water, it constitutes above three-fourths of our "staff of life"; a still greater proportion of rice, which is the "staff" of Oriental life; and constitutes nearly the whole of arrowroot, sago and tapioca, which may be described as composed of starch and water. Peas, beans, and every kind of seed and grain contain starch in preponderating proportions; potatoes, the same; and even those vegetables that we eat raw all contain within their cells considerable quantities.

Take a small lump of dough, made by moistening wheat-flour, fold it in a piece of muslin and, with the fingers, squeeze this bag under water. The water becomes milky, and this milkiness will be seen to be produced by minute granules that sink to the bottom when the agitation of the water ceases. These are starch granules. They may be obtained by similar treatment of other kinds of flour.

Viewed under a microscope, these starch granules are seen to be ovoid particles with peculiar eccentric markings, which I must not tarry to describe. The form and size of these granules vary according to the plant from which they are derived; however, the chemical composition of every variety of starch is the same, excepting, perhaps, that the amount of water associated with the particular starch varies, produces some small differences of destiny or other physical variations.

The ultimate chemical composition of starch is the same as that of carbon, as present in cellulose and the elements of water, and in the same proportions; still, the differences between their chemical and physical properties indicate some difference in the relative arrangement of these elements. As it would be quite out of place here to discuss the theories of molecular constitutions, which such differences have suggested, especially so because they are all rather cloudy, we must pass that by. Broadly, the actual percentage of these elements is: carbon, 44.4; oxygen, 49.4; hydrogen, 6.2.

The difference between starch and cellulose that most closely affects the present subject, that of digestibility, is considerable.

The ordinary forms of starch, such as arrowroot, tapioca, rice, are among the

most easily digestible kinds of food, while cellulose is peculiarly difficult of digestion; in its crude and compact forms, it is quite indigestible by the human digestive apparatus.

Neither of them are capable of sustaining life alone; they containing none of the nitrogenous material required for building up muscle, nerve, and other animal tissue. They may be converted into fat and they may supply fuel for maintaining animal-heat and may, possibly, supply some of the energies demanded for organic work.

Serious consequences have resulted from ignorance of this fact. The popular notion that anything which thickens to a jelly when cooked must be proportionately nutritious is decidedly fallacious, and many a victim has died of starvation by the reliance of nurses upon this theory and, consequently their feeding an emaciated invalid on mere starch, in the form of arrowroot, and so on. And the selling of fancy varieties of starch at ten times its value greatly aided this delusion, so many believing that whatever is dear must be good.

The change which takes place in the cookery of starch may, I think, be described as simple hydration or union with water, not, that definite chemical combination which may be expressed in terms of chemical equivalents, but, a sort of hydration, of which we have so many other examples, where something unites with water in any quantity, the union being accompanied with an evolution of some amount of heat.

Striking illustrations of this are presented on placing a piece of hydrated soda or potassa in water or mixing sulphuric acid, already combined chemically with an equivalent of water, with more water. Here, we have aqueous adhesion and considerable quantitative chemical combination demanded by atomic theories.

When water containing starch is heated to a little above 140 degrees F., absorption of water takes place through the enveloping membrane of the granule, the grains swell up and the mixture becomes pasty or viscous. If this paste be largely diluted with water, the swollen granules still remain as separate bodies and slowly sink, though considerable exosmosis of the true starch has occurred, as shown by the thickening of the water.

I suppose that, in their original state, the enveloping membrane of the granule

is much folded and that these folds form the curious marking of concentric rings that constitutes the characteristic microscopic structure of starch granules; and that, when cooked at the temperature named, the very delicate membrane becomes fully distended by the increased bulk of the hydrated and diluted starch, and thus the rings disappear. A very little mechanical violence, mere stirring, now breaks up these distended granules, and we obtain the starch paste so well known to the laundress and to all who have seen cooked arrowroot.

If now this paste be dried by evaporation, it does not regain its former insolubility, but, instead, readily dissolves in hot or cold water. This is what may be described as cooked starch.

If now the heat is raised, from 140 degrees to the boiling-point and the boiling continued, the gelatinous mass becomes thicker and thicker; and, if there are more than 50 parts of water to 1 of starch, a separation takes place, the starch settling down with its 50 parts of water, leaving the excess of water standing above it.

Carefully dried starch may be heated to above 300 degrees F. without becoming soluble; however, at 400 degrees, a remarkable change takes place.

A. T. CUZNER.

Gilmore, Fla.

REGARDING THE LUMINAL-TREATMENT OF MORPHINE-ADDICTION

I do not know what member of your editorial staff penned the sentiment found at the bottom of page 328 of the May number of *CLINICAL MEDICINE*, namely "Let somebody start some fool notion, such as Bergon's gas-treatment of tuberculosis, and we doctors go crazy over it," but, I can take off my hat to him and congratulate him on his ability and courage in telling the truth as he sees it; and, I want to add, what is equally true, that, if you let somebody start the notion that a certain (made-in-Germany) product, such as luminal, will cure morphine-addiction, a lot of doctors go crazy over it and even as sane, level-headed a bunch of editors as those who sit in the "holy of holies" of *CLINICAL MEDICINE* will publish a paper about it (see May, p. 358), and thousands of physicians will believe it because it appeared in their

beloved AMERICAN JOURNAL OF CLINICAL MEDICINE.

That's what gets my angora. The article about luminal tells us nothing that we do not already know, for, we know that luminal is very much like veronal, both being synthetics, with barbituric acid as the base; veronal being a diethyl-barbituric acid and luminal being a phenyl-ethyl-barbituric acid, and neither one having a curative effect on any recognized disease-condition.

Doctor Goetz declares emphatically that morphine-addiction is a disease. I say just as emphatically that morphine-addiction is not a disease. I have before me at this time no less than six copies of CLINICAL MEDICINE containing articles on morphine-addiction, namely those for July, 1916, by Tuchler; August, 1917, by Stokes; January, 1918, by Wallace; March, 1918, by J. L. B.; April, 1918, by Pearson; and in the current number (May), by Goetz; and not one of them writes from the correct viewpoint, because they all look upon morphine-addiction as a disease.

You might, with equal consistency, say that smoking cigars is a disease. Morphine-addiction is not a disease; it is a condition, a disorder resulting from chronic narcotic poisoning, plus an established toleration for the drug, and complicated by an ever present, dominating fear that is a powerful factor in every case of morphine-addiction. Stokes, and Pearson, both recognize that fact, and speak intelligently of it. Doctors Stokes, Pearson, and Wallace also recognize the fact that each addict is an individual problem, and that we are dealing, not alone with morphine-addiction, but, with a personality, that, while all addicts present a certain number of symptoms that are common to all of them, each patient stands in a class by himself and must be treated accordingly.

In the past twenty years, I have personally cured nearly three thousand drug-addicted people (2,968, to be exact), and I have never yet seen two people thus addicted who could be treated in just the same way, by exactly the same doses of the same drug, at the same intervals; yet. Doctor Goetz positively asserts that, with luminal, he cures every addict, and, he treats morphine-addiction, instead of treating the patient for narcotic poisoning.

Upon analyzing my 2,968 cases of morphine-addiction, one will, inevitably, be

forced to the same conclusions that I have reached; and here are some of these conclusions.

First, morphine-addiction is chronic narcotic poisoning, plus habit, toleration, and fear in an individual who belongs to one of two classes.

Second, that the narcotic always covers up some organic disease, something that in many instances was the underlying cause of the first dose of the drug.

Third, that, spite all that has been written and said about morphine-addiction being a disease, and not a vice, all drug-users may be divided into just two classes.

In class one, we can include all of the physical, mental, and moral defectives, the tramps, hoboes, idlers, loafers, irresponsibles, criminals, and denizens of the underworld, and, among women, the idle rich, who began taking the drug for the intoxication it produces and have kept it up until they have become slaves to its devilish power. And, all these *do not want to be cured*. If forced to take treatment, they may be cured, but, they almost always relapse. In these cases, morphine-addiction is a vice, as well as a disorder resulting from narcotic poisoning. These are the "drug-fiends."

In class two, we have many types of good citizens, who have become addicted to the use of the drug innocently and who are, in every sense of the word "victims." Morphine is no respecter of persons, and the victims are doctors, lawyers, ministers, artists, actors, judges, congressmen, senators, priests, authors, women, girls, all of whom realize their conditions and *want to be cured*. In these cases, morphine-addiction is not a vice, but, an incubus, and, when they are cured, they stay cured.

Age and temperament, environment and moral support have something to do with all of these cases, and the complications that we invariably uncover the moment the drug is withdrawn, make each case a psychological study, as well as a case of morphine-addiction.

Each patient must be denarcotized, the toleration must be removed, the habit broken up, and the fear replaced by confidence and hope. No single drug known to the medical profession can accomplish all of these things.

In order to denarcotize a patient, you must have a drug that is antagonistic to

opium and all of its derivatives; something that will rouse up the narcotized nerves and nerve-centers and produce an effect that is the exact opposite of that of the drug for which a toleration has been established. Cathartics are a necessity. Diuretics, diaphoretics, and stimulants are valuable and must be at hand. Denarcotization and elimination are the keynotes for the treatment.

In order to get the best results, a drug-addict should be treated in a nice, clean, well-kept sanitarium that is operated for the care of all kinds of chronic cases, and never under the same roof with a lot of drunkards and dopers. Between the drunkard and the doper, there is a strong feeling of caste, and the drunkard, no matter how low he may have fallen, always feels that he is far superior to the unfortunate doper.

Among dopers, no matter what their station in life may be, there is a feeling of "camaraderie," and they like to get together and swap experiences, and each one delights in telling how he "suffered the torments of the damned" at some other institution and how near he came to death's door, and, the first thing you know, the whole bunch of them will be "suffering the torments of hell" right then and there.

Among drug-addicts, there is danger in propinquity. Familiarity breeds fear, and one grunting, grumbling patient among fifty that are practically cured will have the entire bunch in a panic of fear in less than half an hour.

The ideal surroundings for a drug-patient is, a room with bath, in a reputable sanitarium. It should be well ventilated, well lighted, and be kept at a proper temperature. Have a nurse that will follow your directions to the letter and work for your interests as well as that of the patient. Provide a supply of bilein and podophyllin tablets, magnesium sulphate, seidlitz powders, saline laxative, and Hinkle's laxative pills. Keep on hand duboisine, eserine, strychnine, sparteine, strophanthin, glonoin, lobeline, emetine hydrochloride, pilocarpine, chloreton, sulphonmethane, and, last and least, veronal.

Armed with this supply of ammunition you are prepared for the conquest and cure of your patient. Meet the complications as they arise. When you have uncovered some old chronic condition, treat it as a complication; and, the better you

are at treating chronic ailments, the better results you will have in treating the addiction.

Hot baths are a valuable adjunct to the medicinal treatment, but, I never, in all of my experience with this class of cases, have seen any really valuable results from the use of electricity.

Many people have asked me what I mean by toleration. The habitual use of increasingly large doses of morphine or other derivative of opium can only be accomplished by establishing a systemic toleration for a dangerous narcotic. That toleration is established by the formation and gradual development of an antitoxin in the blood of the addicted person, and I can prove that statement by taking a man that is using 60 grains of morphine every twenty-four hours, hypodermically, and in twenty-four hours I will put him in such condition, by eliminating both the toxin (morphine) and the antitoxin, and do it so thoroughly that I can make him perfectly comfortable with 1-2 grain doses of morphine every six hours.

Antidote the poison (morphine) in the system, eliminate it, break up the toleration by eliminating the antitoxin, break up the habit, restore the disordered functions, and treat all complications rationally and skillfully, and you will not only cure every case you undertake, but, will make a lifelong friend out of every one you rescue from the hell of fear and slavery.

GEORGE D. SWAINE.

Cleveland, Ohio.

[Doctor Swaine's strictures are not well taken in so far as he takes the editors to task for printing the article to which he objects. Bless you, doctor, we don't have to agree with everything that we print over somebody else's signature. The author himself is responsible for the views he represents, while the editors have to stand for only that which is printed editorially. So far as the luminal article is concerned, there is no doubt in our minds but that many cases have been treated successfully by means of this drug. We ourselves have personal knowledge of several. That does not mean, nor does Doctor Goetz claim, that the administration of this drug alone will cure every case of morphine-addiction.

Doctor Swaine is quite right in insisting that it is not the morphine-addict that

must be treated, but, the patient that is a morphine-addict. Moreover, it is just as necessary to restore the physiological balance in this patient in every respect as it is to eradicate his desire for morphine. In short, the treatment must be complete if it is to be successful and it must restore the patient as nearly to a normal condition as is possible.

Whether morphine-addiction is a disease or "a condition and a disorder resulting from chronic narcotic poisoning, plus an established toleration for the drug, and complicated by an ever present dominating fear," seems to us of little moment, simply because we can not see any marked distinction. Disease is a state of the body in which the normal functioning of one or several organs is disturbed. There are many definitions of disease, but, this may stand.

Whether or not morphine-addiction is a disease or a disorder, really does not matter. However, there is one point particularly that Doctor Swaine makes that seems to us of primary importance, and that is, the ever present dominating fear that is a powerful factor in every case of morphine-addiction. It is this fear that deprives the patient of his confidence of being permanently cured. It holds before his eyes the probability of relapse. It makes him timid in contact with other people and prevents him from doing his best. This fear requires special and personal treatment, and, if it is overcome, a great step toward cure will have been taken.

Doctor Swaine's classifications into "dopers" and "victims" appeals to us as reasonable. Undoubtedly, one must differentiate between the defectives, the vicious, the degenerates that use morphine, and the victims of disease or distress that have acquired the habit more or less innocently or under protest. It is a point worth making that the latter want to be cured, while the former do not. Undoubtedly, there are many indications that must be considered in the treatment of morphine-addiction, and nobody, not even the most enthusiastic supporter of luminal, would dream of depending upon a single drug.—ED.]

IRON IN ANEMIA

The article in the April number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, (p. 254), entitled "Iron in Anemia," is very

timely. During the last century, the laity got their iron by putting rusty nails in any old bottle and filling it up with vinegar, whereas, at present, they eat the jackets of boiled potatoes, or spinach. There is no harm in either practice, but, is it safe and clean? The occupation of the pharmacist dates back to the writing of Exodus, and there cleanliness is imperative.

L. M. YOUNG.

San Francisco, Calif.

WAR SLANG: "PIU-PIU"

In your note on "War Slang," June number, page 465, you ask about piu-piu, "how comes the reduplication"?

Piu-piu is Italian; *piu* means more and *piu-piu* means, literally, "more-more." The French have an equivalent in *beaucoup plus*. In Ferrari and Coccia's Italian Dictionary, I find the following: "*Piu-piu, cosi reduplicato, ha forza di superlativo.*" That means that piu-piu is the superlative of *piu*. As I say, the French have *beaucoup plus*, as a superlative of *plus*. The Spaniard, to use another example, says *poco-poco*, as the superlative of *poco*. For example, there is a certain gait of a horse which is called the "*poco-poco*" trot.

I should not be surprised to learn that piu-piu may be a corruption of *peu-à-peu* (French for little by little, by degrees). We, as a rule, are not good linguists and our pronunciation of foreign words is marvelous. Take for example the beautiful French salutation at parting "*à Dieu*" (or "*adieu*"), which means, "Go with God," or "God be with you." Then compare the English (or American) pronunciation "adoo"! It is not at all impossible that our boys would pronounce *peu-à-peu* "pew-pew." And there you would have your piu-piu. I do not say that this is so, but, it might be.

C. L. STEENSEN.

New York, N. Y.

[The French-English dictionaries translate *piou-piou* as soldier or infantry soldier; and the "Petit Larousse Illustré," as also the larger encyclopedic dictionaries, explain *piou-piou* as a popular term for *soldat de la ligne*. It seems probable that *piu* merely is a corrupted spelling of *piou*.

On the other hand, many correspondents believe that *piu* here is the Italian word,

"more"; yet, we confess our inability to see the connection, the assumption of a corruption from *piou* being, seemingly, more reasonable.—ED.]

THE MEANING OF PIU-PIU

The article entitled "Didonk: A New War Slang," on page 465 of the June number of CLINICAL MEDICINE, arrested my attention. The expression "piu-piu" is not French, and *pioupiou* in all probability was intended. The origin is obscure, but, originally had reference to the cry of the sparrow. It has been translated to "peep, peep," the voice of chickens. It also means a soldier of the line, just as an infantryman is called a "tourlouron."

L. M. YOUNG.

San Francisco, Calif.

SHAPING UP CRIPPLED FEET

Since the war began, a number of young men that were rejected because of crippled feet have consulted me about their trouble. Some of these rejections were entirely justifiable, while others were not.

A story is told of a mountain-lad of Tennessee who came to a recruiting station to enlist. The examining surgeon pronounced him physically perfect, except that he had flat feet. "Well, can't I get in, anyway?" "Why, no, you could not march five miles." "Well, I don't mind telling you why I hate this so bad. I walked 120 miles across the mountains and I do hate awfully to walk back." The doctor evidently could not distinguish between congenital flat foot and flat foot from a broken-down arch.

Until this recruiting business brought it up, I had no idea of how a number of minor foot ailments, each one in itself amounting to very little, collectively could completely disable a strong man. One such case is that of a strong, well-built young man of 22 years who stood 5 feet 11 and weighed 165 pounds. The only thing noticeable about this fellow's physical condition was a peculiar double-shuffle walk. After I had examined his feet, the walk was easily accounted for. He had, first, bromidrosis of the nth degree; second, a hard corn on every toe and a soft one between each little and fourth toe, one of which was infected and had granulation-tissue under the corn with pus oozing from between the

toes; third, a fine bunion on each foot; fourth, chilblains, the skin on both feet, from the little toe back half the length of the foot, being a purple color. No wonder he had a peculiar walk! And his troubles were not due to neglect on his part, for, he had been treating his feet energetically, but, they had been getting worse all the time. After three weeks' of treatment, this man came in to show results from our treatment. He looked at his feet admiringly and remarked that, if his feet had been like that when he took his examination, he would have got in all right. The pathetic tone in his voice showed that it hurts a proud young man dreadfully to be rejected for such a cause.

Treatment for such cases I begin with the operating-room technic for disinfection, soaking the feet in a hot standard solution of potassium permanganate for twenty minutes and then in a cold solution of oxalic acid for a few minutes. The alternate use of hot and cold is the best way to stimulate capillary circulation. Next, dry with a coarse towel, holding it at both ends and with a sawing motion rub the soles into a warm glow. Lastly massage thoroughly with the following skin-lotion:

Mercury bichloride	grs. 15
Ammonium chloride	grs. 15
Resorcin	dr. 1
Listerine	ozs. 8

This lotion is good in any itching skin disease, especially fine for seborrhea; also one of the best for chafing in the groins from marching. Lastly, it is a superb louse-catcher, and every soldier's kit should contain a bottle of it.

For the corns, I employ this combination:

Salicylic acid	dr. 1
Lactic acid, concentrated.....	dr. 1
Resorcin	dr. 1
Flexible collodion	drs. 10

Label: Apply to the corns twice daily for four or five days, when the corn can easily be removed.

For chilblains and tender bunions, the following is effective:

Carbolic acid	dr. 1
Solution of lead subacetate.....	drs. 30
Glycerin, enough to make.....	oz. 1

Label: Apply twice daily.

For sweating feet, this powder is excellent:

Salicylic acid dr. 1
 Boric acid drs. 2
 Exsiccated alum, powdered.....oz. 1
 Talcum power, enough to make.....ozs. 2
 Label: Sift into the shoes.

For infected corns and bunions or any injury, try the following mixture:

Compound tincture of iodine.....drs. 2
 Phenol-camphor drs. 6
 Compound tincture of benzoin.....oz. 1

This antiseptic and healing lotion is another one that should be in a soldier's kit. As a first-aid dressing, it has no equal, but, is especially good for infected sores and wounds of every kind. It also is good for stopping toothache. Small wounds of the face treated by the open method and painted with this lotion will heal very rapidly and with a minimum of scarring.

W. A. MARNER.

Miles, Ia.

INFANT FEEDING THAT PREVENTS INTESTINAL DISORDERS

My views on this subject are in direct opposition to those of the profession in general, but, the results of the generally accepted methods are so very unsatisfactory that I am more than willing to hear of my own methods having been put to a tryout, to compare results.

First, we are taught that an infant should always be nursed by its own mother. This is a great error and is the direct cause of a large percentage of infant mortality. In country practice here, 20 percent of women have no milk for their offspring and in 30 percent more it is so poor that the little ones do much better on cow's milk, thus leaving only 50 percent of mothers that can successfully nourish their babes.

So, I have, for many years, made it a rule, when a child does not do well, to have it weaned and put on modified cow's milk. At first, the mothers objected, showing that the old idea that the mother's milk is the only thing good for the nursing, was universal among the laity, as well as among the profession; however, my patrons have gradually learned better and now they never raise any objections.

The methods of modifying cow's milk, as published in modern textbooks and now generally practiced, are too complicated and cumbersome for general use, besides being

so very illogical. They begin with a much-diluted milk, and every two weeks or so direct it made a little stronger, until ultimately the milk is given full-strength.

Mother Nature does not do it that way: she starts the infant upon full-strength milk (mother's) and gradually weakens it, so that at about six months the infant acquires an appetite for solid food and is thus gradually and naturally inducted into taking more of a variety of food.

And right here I want to challenge another universally accepted theory, namely, the idea that an infant can not digest starchy food. Why is it that the little ones, after they are four or five months old, have such an inordinate liking for potatoes, bread, and crackers? And, I have never seen any but good results from the judicious use of these foods just as as soon as the child manifests a craving for them.

The best method of modifying cow's milk for infants is by using Fairchild Brothers and Foster's peptogenic milk powder, which yields a product as near to perfection as can be attained. I have, however, learned to be particular in its use. It won't do to give a mother a package of the powder and tell her to use it according to the printed directions—which are simple, plain, and explicit enough—but, I always insist upon having an expert nurse go and show the mother how to prepare the milk. I have employed this method for nearly twenty years and have not a single failure to record.

When I first came to this place, the hot months of summer used to be my busy time with the intestinal disorders of the little ones. Cholera infantum, diarrrhea, and dysentary were rampant. After several years of this, I came to the conclusion that it was all due to the neglect of the simplest laws of hygiene. So, I started a campaign to educate my clientele upon how to take care of their babies.

First, of course, came the matter of feeding, to which I have referred to above; but, children, however well fed, will get their alimentary tract out of order occasionally, and the mothers were instructed how to detect and remedy this as early as possible; for, prevention is easier than cure, and they soon learned the magic of a few pink calomel tablets, followed by a dose of castor-oil or a saline laxative

(those who have children keep these remedies on hand). And now nearly all other regulations, such as exercise, bathing, clothing, et cetera, need not be detailed here; suffice it to say that the results from that campaign have been exceedingly good, one of the most gratifying accomplishments in my whole professional career. I have not seen a case of cholera infantum in ten years, and in all that time not more than a dozen cases of other intestinal disorders. And that is not all; those children who get through the summer in such good shape are practically immune against colds, bronchitis, pneumonia, et cetera. Through the long and severe last winter, I had but one case of bronchopneumonia in a child to treat.

W. A. MARNER.

Miles, Iowa.

REVIEWS AND REMARKS

In the last number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* report is made of a case of delirium tremens that was not cured, but, rather, made worse by capsicum. That unnecessary suffering was caused by using only water and much too large a quantity of capsicum, is apparent. Had the proper drugs been diluted with fresh sweet milk, the cure would have been perfect. There is, also, a sly wink at the "yarb-doctor" as our inferior.

Now, while I am some generations removed from those ancient writers, I thought it worth while to go back over the history of medicine—"lest we forget"—the source of our origin. The first doctors were those who took things first-hand from nature and, by extracting their virtues by cold or hot water, made the medicaments with which they treated the sick. As men grew wiser, tinctures and fluid extracts were made. Then came powders and pills and wafers and capsules and tablets, and, latest and best, the concentrates, in the form of alkaloids, glucosides, resinoids, and so forth.

In my youth, I accompanied my father, who was a doctor of the regular school, as he sought for materials for his *materia medica*. This was in this country and before the civil war. In earliest spring, he took me to the low lands by brooksides and showed me the first *symplocarpus foetidus*. Later, when balmy breezes blew through the beechen woods, we stood among the

opening buds of the pocomoon, both white and yellow. As the season advanced, we dug the roots of the *podophyllum peltatum* and the *geranium maculatum*, and in late season those of *phytolacca* and *serpentaria*. Here I stood face to face with nature, reading her wideopen book of botany, and learned at first hand the uses of some of her medicinal treasures.

Later, I went to college. I was attending the regular medical school, but, had an acquaintance who was attending the eclectic school. There, they used only native plants, as the idea taught was that our own country was able to produce all the medicines necessary for the care of disease.

Those eclectic boys we found to be a wideawake, intelligent set of fellows, and, with specific diagnosis and specific medication and Merrell's medicine, they went out more particularly into that quadrant of our territory west and south of Cincinnati from the Pacific to the Gulf, and made good. And today the Lloyd's specifics are as fine drug extracts as can be had, yet, special pleaders are liable to lack in some ways.

On my part, I followed the regular program, but also I took all I could get from any other school that had anything to present.

When the alkaloidal granules came, with what alkalometry had to say, I felt that we had really reached the higher peaks, along which our path had been laid for many years.

And now, as I close this brief review of ancient days, I pause to lay a last fond tribute on the grave of that great man, my father, whose wish was, to sleep with no tomb to mark his resting-place. Long years before Ian McLaren had made immortal the Scotch doctor William MacLean, my father, Dr. C. H. Cope, of Colerain, Ohio, had lived the ideal life, had practiced medicine and surgery for forty years, and his death closed the triumphant life of the country doctor, whose years were spent, not for himself, but, for others.

It is with reverent hands that I touch the lavender-scented old lace that wraps his memory and behold the beauty of a life whose recollection is an inestimable possession.

A few years ago, I published an article in this journal, on the use of emetine. Later, a doctor wrote in this same journal

that he had no use for emetine, that he cured all his emetic cases with Dover's powder, and that that was good enough for him.

It is a truthful statement that there is no true Dover's powder without ipecac and, further, there is no good ipecac without any emetine content. As emetine is the amebicidal agent in ipecac, it follows that this was the curative agent in the Doctor's cases. The only way that Englishmen could overcome the terrible bowel trouble of that country was by means of large doses of ipecac—the same effect now being obtained by small doses of emetine.

But one more heretical statement and I am through.

At a recent meeting of the American Medical Association, I was much interested in the biological products presented, and, on talking with the representative of one of the largest concerns producing antitoxin, I asked him whether it contained any carbolic acid, and he admitted that it did contain some. I asked him whether it were not possible that this phenol content really were the true germicidal agent in this remedy, seeing that in earlier years before antitoxin was known, we successfully cured the most malignant cases of diphtheria by applying pure beechwood-creosote; later using pure carbolic acid.

The heretical suggestion I offer is this: Let those engaged in vivisection try out carbolic acid in the strength as present in antitoxin and report results. It often is found that the small things of this earth are able to rise up and confound the mighty.

C. S. COPE.

Detroit, Mich.

[Phenol is present in biologic remedies usually in a strength of 0.4 percent. Experiments with such a solution of pure carbolic acid have proved it to be inefficacious as a germicide for pathogenic bacteria.—ED.]

THE CONSULTING PHYSICIAN AND THE PHYSICIAN WITH WHOM HE CONSULTS

There are times when a physician feels the need of counsel. There may be something difficult or obscure about the case he is attending or he may have failed to find the right remedy to cure a patient. Then, again, the family may be dissatisfied with

the progress of the case and ask for counsel. On very many cases, I am sorry to say, another physician is called in merely to bolster up the opinion of the attending physician, to confirm the diagnosis, to put the seal of approval upon what has been done for the patient. He reports to the family with a great deal of satisfaction that "the consultant agrees with my diagnosis and says that I am doing all that can be done for the patient." I also have known of doctors being called in consultation on a case, and they told the attending physician one thing in the consultation-room, the family something else, and the neighbors something entirely different. Such men are not to be trusted and are not the kind to be called in consultation.

What should be the real object of calling another physician in consultation? There can be but one answer: to help a doctor cure his patient. Else, why call him in consultation?

I have, in my practice, had to call for counsel a few times, and at such times I always chose a doctor who, I thought, knew more about the case than did I. I always selected a doctor who had a reputation for curing his patients. It made no difference to me whether he agreed with my diagnosis or not. If I was wrong in my diagnosis, I wanted to know it; but, most of all, I wanted his advice as to how to cure my patient.

I have known of doctors who, when called in consultation, would be all right in the consulting-room, agree with all the attending physician had to say. They would pat him on the back and tell him he was "a good fellow and knew his business"; however, when this same consulting physician got a chance to talk alone with some member of the family, he would say: "Of course, you know, the doctor has not had much experience and does not understand cases like this. I am very sorry that you did not call me at first, for, I could have saved the patient."

How many good doctors have been stabbed in the back and undermined by the devilish insinuations of the consulting physicians? This happens so frequently that we often ask ourselves the question, "Is there honor and decency in the medical profession?"

In conversation with a medical friend of mine, he mentioned a prominent consulting

physician (since dead) and he said of him: "Whenever he is called in consultation, he always tries to get the patient away from the attending physician." And this form of treachery is not an uncommon thing among our doctors—more's the pity.

A doctor who has a mania for operations is not a safe man to call in consultation; for, his hobby is surgery, and he can not see anything outside of that. A physician's reputation depends solely upon the cures that he makes. Every cure that he makes, either alone or through the advice of a consultant, adds just so much to his reputation and binds the people more closely to him. Therefore, in a difficult or critical case, naturally he will call upon a physician as counsel who, he thinks, will help him cure his patient.

A good consulting physician is a broad-minded, liberal man, a progressive man, one who is up to date, who has the best there is in medicine, a doctor who has had wide experience in the successful treatment of difficult cases. If a physician can not cure the diseases common to our country, he will not be of much help to you in the consulting-room. Very many doctors called in consultation are well informed on the technical part of their profession, but, are weak on therapeutics. Such men are not of much use in consultation. A narrow-minded, bigoted man, a one-idea man, the man with a fad or hobby likewise will not be of much help to you in the consulting-room.

Now, the doctor who knows *materia medica* is a tower of strength in the sick-room, a Godsend to a brother physician in the consulting-room. A friend of mine, in discussing a certain physician, said: "When that doctor wants counsel, he always calls Dr. Blank, and that doctor loses about every patient he treats." Of what earthly use is such a man in the consulting-room? If he can not cure his own patients, he certainly can not help anyone else to cure theirs.

A physician who is building up a reputation upon the cures that he makes is building upon a solid foundation. A doctor of that kind is a safe man, a good man to call in consultation, for, his skill, his knowledge in the art of healing the sick will be of real, practical help to you.

Most of us know that book-knowledge of *materia medica* is one thing, but, actual

clinical experience with the remedies is an entirely different thing. Therefore, a real knowledge of *materia medica* must be learned by testing the remedies at the bedside of the sick. This is the acid-test of what a remedy will really do for the sick.

In my study of *materia medica*, I took up the best book I could secure on *materia medica* of a certain school of medicine. I studied it early and often, until I had a working-knowledge of the remedies of that particular school of medicine. Then I practiced that system of therapeutics exclusively for several years, in order to test the remedies myself at the bedside of the sick. In this way, I have, at different times, practiced for several years the regular, eclectic, homeopathic, physio-medical, and biochemical schools of medicine. This is the only way to study *materia medica*, if you want to know it. To accomplish this task, it has taken me nearly fifty years, but, it has been time well spent, and now, in the sere and yellow leaf, I can say, with the Talmud, "I know my power, because I have learned from many teachers." I would not part with the knowledge, that I possess, of the *materia medica* of all schools of medicine, for the wealth of a Rockefeller. For, it is *the* thing that has helped me to do things in my profession; it is *the* thing that has helped me to be of real assistance to a brother physician, when he sent out an "S. O. S."

A physician who knows the *materia medica* of all schools of medicine has infinite resources to draw upon in his battle with disease. In his power over disease, he becomes almost invincible, for he can almost always find a remedy to save human life or alleviate suffering.

In my time, I have been called into forty states of the Union in consultation with physicians of all schools of medicine. When I am called in consultation with a brother physician, I always keep this one thing in mind, that my business there is, to try to help him cure his patient, and I concentrate my mind upon the one thought: to give him the best there is in me. I take just as much interest in trying to cure the patient as if it were my own, and, when the sick person gets well I am just as much pleased as if he had been my own patient.

Doctors do not always carry out the advice of the consulting physician. I have seen remedies given and something done

absolutely contrary to my instructions and which interfered with the remedies I had suggested, thereby lessening the chances of the patient's recovery.

The consulting physician and the family physician must, first of all, have confidence in each other. They should be open and frank with each other at all times and in all places. The treatment agreed upon in the consulting-room should be carried out carefully and honestly; if not, then of what use has the consultation been? When a course of treatment has been agreed upon, a schedule should be made out, outlining how and when each remedy prescribed is to be administered, as also written instructions that may be necessary to serve as a guide for the nurse. The family physician gives the schedule to the nurse, and she is expected to carry out the course of treatment laid down.

It sometimes happens that different members of the patient's family will "butt in," criticize or find fault with the treatment, and say how they think the case should be managed. In such cases, it is best to pick out the most-level-headed person in the family, generally the head, and give him or her to understand that the nurse has her definite orders and that she must not be interfered with.

You may be called in consultation with a physician and find his treatment has been entirely different from what you would have given; but, be chary of your criticism. There are times when silence is golden, and this is one of them; however, you may, possibly, say: "Now, doctor, if this were my case, I should treat it so and so."

If you are called in consultation with a doctor of a different school than your own, unless you know the *materia medica* of his school of medicine, you can not talk intelligently with him about the remedies he has used. Therefore, any criticism from you on his treatment of the case would be in bad taste and entirely out of the question. Some consulting physicians endeavor by their talk and manner to impress the family with the idea that they are "it"; that they know it all, and that the family physician is a mere cypher, in their estimation. If you are a smarter man than the attending physician, rest assured the family will find it out without your taking special pains to inform them of this fact. The American people are intelligent, and they can

generally tell a real physician when they meet him.

A consulting physician should be extremely careful about what he says to any of the family or the patient. Where he is in consultation, he should give the impression to the family that he respects their family physician and has confidence in him. If he can do so, it is always best to say something nice about the doctor and about his treatment of the patient. This leaves a good impression upon the minds of the family and family physician. A foolish grin, a sneering remark (behind the doctor's back) has been like a "stab in the back" to many a good doctor and has helped to undermine him in the confidence of the family.

There are certain individual rights that every American citizen has, and they are a personal matter with him: (1) to choose his own church, his own form of religion; (2) what his politics shall be and what party he shall identify himself with; (3) what school of medicine he shall belong to or what system of therapeutics he shall practice. I repeat, these are personal matters, and you have no right to ask a doctor what school of medicine he belongs to, any more than you have to ask him what church he belongs to, or what political party he is identified with.

Oh, if only we could forget our isms and pathies, all our prejudices, our petty jealousy, and only remember that we are *physicians*, here to heal the sick, what a grand world this would be and how much good we could accomplish for God, for our profession, and for suffering humanity!

ELI C. JONES.

Buffalo, N. Y.

IS THE FAMILY PHYSICIAN TO BE REPLACED BY THE COOPERATIVE CLINIC?

Yesterday I heard a lament. Amidst mental sackcloth and ashes, with a gnashing of teeth and a wailing of voices, a certain gentleman declaimed in this fashion:

"I am neither a poor wage-earner nor a rich man; I am an average, middleclass man of family. There are five of us and I manage to save very little out of my \$3500 annual salary. When my colored man or my white cook fall ill, they go to the Johns Hopkins Hospital dispensary. For

15 or 25 cents, they are able to have the 57 different tests made and instruments applied that are necessary to assemble the various facts which I, as an engineer, know to be necessary before a true judgment as to a disease and its correct treatment can conscientiously be given. In this way, a poor person is able to obtain kidney tests, blood estimation, Wassermann reactions, blood counts, Abderhalden tests, x-ray pictures, sputum analyses, stomach washings, and the other score and more methods required to obtain facts of a person's real physical health or its absence. Similarly, the wealthy man is able to pay the 10 or 20 dollars each for \$500 worth of facts.

"Not so the average honest man of family, as I. I can neither afford the hospital tests nor dare I go to a free clinic or dispensary, where all these things are honestly carried out.

"What can I do, then, but follow the customs and traditions of the ages? I must have a family doctor. And a family doctor, able, conscientious, and industrious as he is, can afford neither the time, the circumstances, nor the equipment necessary to make all the different tests that are called for. The upshot of this is that I foolishly think his ability and his experience and his knowledge of my anatomy give him an occult, uncanny ability to suck the truth out of his thumbs without any exact facts to go on."

All that Mr. B., the engineer, said is almost wholly true. To obviate all this, I have been advocating for some years that pay-clinics and cooperative clinics be established. Others have promoted like innovations in this field, and at last the pay-clinic idea has begun to take root in the Brooklyn Hospital, the Boston Dispensary, the Massachusetts General Hospital, the Lakeside Hospital of Cleveland, and the East Baltimore Medical Society of Baltimore.

The cost of truth, as it is in medicine today, is either a few cents for the poor or a small fortune for the rich. The average honest man is dependent upon doctors, who, however honest and able they may be, yet, are too busy or also too poor to spend the money and the six or more hours necessary to gather the facts about the spinal fluid, stomach-juices, blood, urine, sputum, and other outcroppings of your tissues. In order to make the securing of this information possible, family physicians must gather

together and form pay-clinics, where each of the score of doctors must do a definite share to unearth facts before administering advice.

If the doctor is thus employed at the rate of \$5.00 for each two hours and seven hours a day, the patients will receive the latest scientific service, while the doctor's income will be \$5,250 a year, net. This would be equivalent to him of a \$10,500 family practice and the facts and data discovered would be the same as a rich man pays hundreds of dollars for.

It is up to the family doctors and their patrons to establish pay-clinics that in time might equal the Johns Hopkins or the Mayo clinics. Then the civil population's health will begin to approach that of the army, about which Surgeon-General Gorgas has just written:

"The world has never seen a better army than America is putting into the field, and the standard is constantly rising. The death rate decreases as the health conditions improve. The best record previously was that of the Japanese army, which was 20 per thousand. Ours is only 8 per thousand, and in some regiments only 5 per thousand.

"The American boy is safer in the army than at home, and, except when sweeping casualty lists come in, the death rate will be much lower than in civilian life. Social diseases are being rapidly curbed, if not eliminated, and the chief obstacle we have to contend with in that line is with the recruits from civil life."

In fine, soldiers are safer in war than in peace; safer in the army than in a religious civil community.

L. K. HIRSHBERG.

Baltimore, Md.

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[Doctor Hirshberg's recommendation of pay-clinics has rather a wider application than appears from his outline. For some years, groups of physicians in small and large towns throughout the country have combined for the purpose of making available to their patients of moderate means the facilities and benefits of modern methods in diagnosis and treatment. While the so-called pay-clinics are intended for the benefit of wage-earners, small tradesmen, and so forth (to establish a purely arbitrary line, let us say for people with a family income of \$1,800.00 or less per annum).

these combinations of physicians serve the purpose of benefiting the members of the salaried middle class, bookkeepers, professional men, tradesmen, people with incomes of from \$2,000 to \$6,000 or so, who have a certain position to maintain and to educate their children, and who find it very difficult to meet physicians' bills or other extras, for that matter.

In addition to this, there is the idea, proposed many times, the subscription service. That is to say, a physician proposes to his families that they pay a stated amount for each member of the family per year, say, \$5.00 per head per year, and that, in consideration of this payment, the physician agrees not only to attend to the members of the families when sick, but, also, to do his best to keep them well. Indeed, it will be to the interest of both parties if the physician devotes his attention mainly to prophylactic endeavors and he protects his clients from becoming ill.

In this manner, the physician would receive a stated income, while his clients would be glad enough to know that everything is being done to ward off impending sickness, with its attendant loss of salary, time, and so forth.

Now, as to the group-services, these comprise, very naturally, examinations on the part of the internist, the eye, ear, nose, and throat man, the genitourinary specialist, in short, include complete physical examinations, for a moderate sum of money, by which the condition and functioning power of all organs of the body are determined. A sort of inventory ascertaining the assets and liabilities of the examined person. The result of all these examinations then is discussed in consultation and a diagnosis of any existing deviation from health is made and the best treatment agreed upon and carried out under the supervision of that member of the group who is most fitted to undertake it.

Such cooperative work on the part of groups of physicians, comprising anywhere from four to six members, might be combined suitably with subscription services, it being understood that the subscribers are to present themselves for complete examination once or twice every year. In the case of actual illness, especially if this is chronic and difficult of diagnosis, it is self-evident that much greater benefit would accrue to the patient from cooperative

study of several physicians whose interests are devoted especially to different special diseases than if the patient were in the hands of one general practitioner who simply can not be a highly accomplished specialist in every branch of medical knowledge.

We believe that the future, indeed, the near future, will bring many changes regarding the socioeconomic status of physicians in their relation to their patients. Even if the change to state medicine outright is not impending very soon, the pay-clinic idea is bound to grow and, with it, the idea of group-services, both of which are necessary to extend to the people of moderate means the benefits of modern science. There are many points in this problem that would be interesting, but, this editorial comment hardly is the place to discuss them in detail.—ED.]

THE WAR AND TUBERCULOSIS.

France is finding in tuberculosis one of the worst of war's byproducts. Before the conflict had continued two years, her hospitals were filled with soldiers suffering from the plague, while facilities for adequate care were lacking. The following facts as to measures invoked are extracted from a recent report by Dr. William Charles White, chief of the Bureau of Tuberculosis of the American Red Cross in France:

When the American Red Cross, in cooperation with the Rockefeller foundation, entered the fight against tuberculosis in France, the *Service de Santé* of the army was utilizing all the main French institutions, and there was little room available for the women, children, and old men suffering from the disease. Last October, there were 8,879 tuberculous French soldiers not yet discharged from service, and for these 6,521 beds had been provided in 37 hospitals. Between August, 1914, and November, 1917, there were 80,551 soldiers discharged from the army on account of tuberculosis, and the French department of the interior undertook to provide for their care by means of *stations sanitaires* and departmental committees.

Until recently, practically no provision had been made for that portion of the population that had been engulfed by the German advance into France and Belgium, and, no longer being of any economic use

to Germany (the aged, the young, and the diseased), had been sent back into France. A large proportion of these are consumptive. The wretched housing-conditions in which many refugees were compelled to live in Paris and elsewhere helped to make them peculiarly subject to tuberculosis.

A careful survey of the field indicated that the Red Cross could render most effective assistance among these groups. The first opportunity for usefulness came in the survey of conditions in the tuberculosis-barracks that had been provided by the *Assistance Publique* in connection with the large hospitals and alms-houses in Paris. There were 1052 beds in them; yet, only 174 were occupied. Unattractive conditions seemed to explain, in large part, the failure of the sick to make full use of this institution. The American Red Cross thereupon increased the nursing force, established diet-kitchens and recreation-rooms, and provided additional clothing and needed materials. The institution quickly became more popular and soon was caring for 657 patients. Later, new rest-halls, dining-rooms, and recreation-rooms were constructed by the Red Cross.

A survey of the institutions outside of Paris showed that these provided 11,000 beds for a population of 39,500,000 persons, with a total death rate from tuberculosis of 84,443 in 1913. Many of these institutions required additional bedding, food, and equipment, which the American Red Cross undertook to furnish at an expenditure of approximately 100,000 francs a month.

Another plan, similar to the home-hospital plan in New York City, now is being followed in France, especially for those refugee and repatriated families with tuberculous members. These might spread infection if allowed to go into ordinary houses. The new plan contemplates placing such families in small houses especially constructed for the care of a tuberculous member. Each house is composed of three rooms (two sleeping rooms and a living room) with a small porch for the patient. The children will be placed in open-air schools and those able to work will be given vocational training in such trades as gardening, carpentry, tailoring, and shoemaking. The domiciliary care of the consumptive, it is believed, is one of the most im-

portant factors in the war against tuberculosis in France, as elsewhere.

After studying the question of the relation of tuberculosis to the various armies, it was decided that the American army, no matter how careful the exclusion of tuberculous men from the draft, still would have to deal with a group of cases that would develop from existing lesions not possible of diagnosis in earlier examinations. It was thought that this was a field of work in which the American Red Cross could give assistance to our own army in France. It seemed obvious that there would appear certain pneumonic types of tuberculosis, acute miliary cases, severe hemorrhagic and pleuritic cases, and probably a number of cases of tuberculosis in parts of the body other than the lungs.

An offer to the army headquarters, to provide a hospital near the shipping ports where the Red Cross would be given permission to take care of such cases needing attention prior to their return home, has been accepted. The American Red Cross will undertake the erection of one such hospital, which then will be turned over to the army. A similar institution may be provided at a second point.

Four tuberculosis-hospitals in France are now maintained and conducted solely by the American Red Cross and 96 French hospitals are aided with funds and supplies, while, in addition, much educational and visitational work is being done.

IS THE BIOLOGIC TREATMENT OF INFECTIOUS DISEASES ARTIFICIAL OR NATURAL?

In one of the quasi medical journals which stand for drugless treatment and vegetarianism, which flirt with New Thought, Osteopathy, Chiropractic, etc., the editor, in an article on infantile paralysis, ridicules the idea that the disease is caused by an infectious virus that invades the organism from without, maintaining that the determination of this question is not a laboratory secret that is to be conquered, but that its origin must be sought in filthy blood and clogged bowels. He claims that the "danger of transmission by contagion or infection is exaggerated, and the assumption that infantile paralysis is caused by a germ carried from person to person is without foundation."

* * * It has not been possible to de-

cide even with reasonable probability where children caught the disease; the truth is that they did not catch it, they generated it within themselves."

As a corollary of this view, the author deprecates the attempt of laboratory-workers to find a biologic remedy, for instance, a serum that will be effective for the cure of this disease. He maintains that a curative serum will never be found, "because it is not natural to heal disease by artificial treatment."

The author then proceeds to outline a "natural" course of treatment, according to which the "first thing to do on reaching a case of infantile disease is, to wash the intestines with repeated warm water enemas, little enemas, suitable to the age of the child and oft-repeated, and little doses of hot water by the mouth repeatedly, with frequent hot-water spongings of the skin, and these things done well at the beginning; and the child is saved and well in a few days and probably without paralysis." He calls this procedure the natural treatment, saving treatment, and curative treatment in infantile paralysis.

There can be no doubt of the merits, importance, and necessity of employing the so-called natural, that is to say, the general hygienic and dietetic methods of treatment in this disease, exactly as in all others, whether they be bacterial or protozoal in origin or due to perverted metabolism; and it may not be amiss to determine what is meant by "natural" and what by "artificial" treatment.

On general principles, it may, probably, be said that a form of treatment which re-establishes the normal functioning of the organism is a natural treatment. If artificial treatment, so called, is mentioned in a deprecatory manner, as opposed to common-sense and to natural treatment, it will be well to find out whether that treatment which is designated as artificial is really such.

It is granted freely that the treatment applied by the author—namely, washing out the intestines and employing hydrotherapeutic measures—may be called natural. However, the author is mistaken when he characterizes the biologic treatment as artificial, whether this be applied in the form of serums or bacterins; and, if the author says that "the attempt to heal the body, self-poisoned by filth within

the system, by serums is only adding foreign matter to an already poisoned child," it is to be inferred that he has not given sufficient attention to the study of bacterial therapeutics to understand the facts.

The assertion may be made without fear of successful refutation—in fact, it is a truism—that *bacterial therapy constitutes the natural treatment of bacterial diseases*. The explanation of this apparently paradoxical assertion lies in what we know of the behavior of the organism when it has been invaded by pathogenic bacteria, and also of the response of the organism to stimulation with bacterial remedies.

It may be admitted at the outset that the theory concerning the resistance of the organism to infection is pure theory; still, this theory is supported by very strong circumstantial evidence, confirmed by the acid-test of practice.

In brief, it is believed that the organism responds to the invasion of bacteria or of other organisms that tend to cause disease, by the development of substances that are antagonistic to the multiplication and life itself of the foreign organisms, that tend to dissolve them and to remove or eliminate them from their host-organism.

It is not necessary here to inquire into the role played by the phagocytes and by the antibacterial serum-substances in this resistance to disease. It is sufficient to know that the mechanism of defense and of opposition becomes active immediately after infection has occurred. If the struggle against the invading harmful virus is successful, the infection will not develop into disease; in the other event, disease occurs, and is severe and progressive in that degree in which the defensive forces of the organism fail in their object.

Even if disease has declared itself, the body may rally its defensive forces, and these may become sufficient to overcome the virus, to eliminate the infection and to repair any harm that has been done. This is what takes place, particularly in those cases of acute self-limited infectious diseases that end in recovery. The activation of the natural defensive forces undoubtedly is promoted and fostered by a treatment designed to free the organism of effete matter, to cleanse it of its impurities, to improve nutrition, and to raise the general tone of the body. And, in so

far as this is accomplished by general hygienic and dietetic methods without recourse to powerful drugs, the treatment may be called natural.

The opinion, according to which the prevention of disease, and its cure, depend upon the sufficient and efficient formation of antibacterial substances, is supported by the fact that certain of these substances can be demonstrated by serodiagnostic methods in greater amounts in favorable cases than in unfavorable ones, and that they persist for some time after the symptoms of the bacterial infection have disappeared.

In formulating a plan of treatment for these diseases it is argued correctly that it should be necessary to assist the body in the formation of antibacterial substances, and it has been found that this result is attained by the introduction into the circulation of killed bacteria or bacterial substances. After such an introduction, the development of antibacterial substances is promoted, and after a brief reaction (the explanation of which here would lead us too far) a distinct improvement is manifested in the condition of the patient, which is greater than that observed in parallel cases treated by "natural" methods alone. In so far as the body is stimulated by these bacterial substances to produce its own antibacterial substances actively, the method is correctly designated as active immunization.

In very acute and severe infection or disease, it is not always practicable to introduce bacterial substances, especially if the infectious bacteria are carried in the blood in great numbers, and here active immunization cannot be considered, at least not during the acute stage of the disease. However, it is possible to supply to the infected organism the needed antibacterial substances which it does not produce in sufficient amount, because they can be obtained in the serum of animals (usually horses, asses, mules, and goats) in which an infection with the related virus has been produced, in a manner by which the related disease is prevented. These immune-sera have been employed with great success in various acute diseases. At present, the hope is entertained, with reason, that it will be possible to elaborate a curative serum against infantile paralysis.

The administration of a curative serum

is designated as passive immunization in so far as the treated organism is furnished the antibacterial substances that it requires, and is saved the exertion of elaborating them by its own active efforts. An instance of passive immunization is, the antitoxin treatment of diphtheria and of tetanus.

In so far as bacterial remedies (bacterial vaccines or bacterins and curative serums) aid in the activation of natural forces of action, the treatment of bacterial diseases defense and struggle against bacterial infection by their means is entitled to be classed among the *natural* methods of treatment.

The objection to "introducing foreign matter" or "introducing animal filth" into the diseased organism has a catchy sound and seems to be well calculated to impress the uninformed and ignorant. Nevertheless, it is based upon specious and incorrect reasoning. It must be admitted that in passive immunization the antibacterial substances are introduced in a vehicle (serum) which is "foreign" to the diseased organism, and the objection which can be raised on that score has occupied the minds of physicians. Unfortunately, it has not been found possible thus far to obviate this difficulty, and, in the case of poliomyelitis, it has been suggested to minimize the difficulty by employing homologous serum, that is, serum obtained from humans who have recovered from the disease and who, by virtue of this recovery, carry effective antibacterial substances in their serum.

The reproach, if reproach it be, of employing "artificial treatment" for a bacterial disease does not apply justly to biological methods. These are no more artificial than are hydrotherapeutic, dietetic, and other physiological and physical procedures. Even massage is more artificial than is bacterin-treatment.

Vaccine-treatment is effective in its own sphere. It needs support, it must be supplemented by other measures, and the physician who takes into consideration all the points that need attention will be more successful than the one who employs only vaccines as the medicine-man has recourse to incantation, and more successful than the one who limits his attention to general, hygienic, dietetic, and hydrotherapeutic measures.

Chicago.

H. J. ACHARD.

In the World War

LETTERS FROM FRANCE—I

Another section of the U. S. Army Ambulance Service has been cited for its brave work, as shown by the following order of the general commanding the division of infantry in question:

"Sanitary Section U. 553 of the ——— Division, in the course of the recent operations, under the energetic direction of Lieutenant-Adjoint Albert Smith, gave proof of devotion and daring, by assuring night and day, in villages much bombarded, the transport of the wounded whom the drivers, in order to hasten the evacuation, went to fetch with contempt for the danger, even from the first-aid posts of the battalion."

The following members of Section 553 also received individual citations: First Lieutenant Albert E. Smith, commanding the section; Sergeant Albert Fetler, Corporal Mortimer Lenihan, Private Edward Bickel, Private Warren C. Brown, Private William C. Cole, Private James J. Culhane, and Private John J. Way.

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Doctor Nettar presented, recently, before the Academy of Medicine a new form of disease, which he named lethargic cephalgia, this resembling, in some of its traits, tuberculous meningitis and that of the cerebrospinal variety, but, differing notably, in that the new disease is accompanied by persistent somnolence and ocular troubles and by the total absence of any reaction in the cerebrospinal fluid.

This malady was described some years ago under the name of "nona," being found in the Alps of Italy and the mountains of Hungary and Dalmatia; cases have also recently been observed in Vienna and in England. It is infectious and epidemic, with a mortality of nearly 50 percent; if cured at all, it is only after some weeks of treatment. English investigators attribute the disease to intoxication from damaged food, but, Doctor Nettar believes it to be

of microbial origin. He has had success from treatment with hexamethylenamine, but, does not believe the disease can be controlled until the proper serum-treatment is found.

Doctor Coudray presented the case of a soldier afflicted with a gaseous tumor of the neck immediately following the bursting of a shell of large caliber near him. Upon examination, the first several rings of the trachea were found ruptured, which rupture was explained by the extraordinary and violent involuntary effort to combat the sudden and unexpected air pressure caused by the explosion—following the instinct of self-preservation.

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A report drawn up, by the British Local Government Board, from statistics secured from a German source shows that the decrease in the German birth-rate during the three years of 1915, 1916, and 1917 is equivalent to the loss of 2,000,000 children.

These statistics bring out the fact that the war robs a country of its virility. The thirty years of Napoleonic wars robbed France of all her young manhood and it has taken a century for this handicap to be overcome and the quality of the race to be slowly improved to its present level. The present war comes at the moment when the French race was just entering upon a new era of renewed physical and mental vigor slowly built upon the shattered remnants of the devastation which followed the career of Napoleon, and now we see the flower of her race again sacrificed, to preserve her ideals of justice and freedom.

—

What is the economic value of a young healthy man? A gentleman has made this offer: He will raise a body of men, say, 1,000, that are above forty-five years of age (the draft-age limit is 31), but, who can pass a rigid physical examination and are willing to volunteer as regulars in the place of a like number of selected, edu-



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Laboratory at the Base Hospital at Camp Meade.

but, precautions have been ordered, to prevent excesses or wastage. Officers have been requested to emphasize to their commands the special importance of food economy and the furthering of the successful campaign now being carried on by the patriotic folk at home. The purpose is, to conserve the food supply as much as possible, while assuring sufficient amounts for actual use.

The scheme includes the presence of a company officer at each meal and the investigation of the quality of the food, its preparation and conservation. Special attention has been called to overhelpings that result in wasteful leavings, utilizing the surplus fat for kitchen-grease, economy in the use of bread and butter, use of breadcrusts and stale bread in preparing the various dishes, throwing away or disposal of usable food in incinerators, and so on.

Definite steps have been taken for the enforcement of this economy, including frequent inspections by staff-officers and disciplinary action for violations of this request. The object in view is, the avoidance

of waste in any form, and not a reduction of the rations.

The development of modern warfare has necessitated the adoption by the medical department of the Amex forces, of two types of mobile sanitary formations, which, in the French army, are known as *auto-chirs*, *autonomes*, and *groupes complémentaires*.

These units have been designed, in order that facilities for immediate surgical aid to the seriously injured may be brought to a man, instead of removing any chance of recovery that the nontransportable wounded may have by conveying them an uncertain distance to hospital.

The mobile hospital consists of fixed sterilizing x-ray and electric lighting plants, mounted on two autotrucks. In addition, upon ordinary autotrucks, are a light-framed operating-room, tentage, and hospital material sufficient to establish a surgical hospital of 120 beds. The mobile surgical unit consists of portable sterilize-

ing, x-ray, electric lighting plants, a light-framed operating-room, and surgical material, mounted on two autotrucks. It does not provide hospital facilities.

The unit supplements the equipment of the advanced field hospital and provides re-



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Healed Wound Ready for Repair.

quisite surgical facilities for immediate surgical aid to nontransportable wounded.

B. E. SHERWOOD-DUNN.

Paris, France.

THE "KHAKI PRISONERS-OF-WAR-FUND"

"An urgent appeal to the generous public of the United States, addressed on behalf of the British prisoners of war in Germany," has reached us recently. This is signed by Lieut.-Col. Lord Willoughby de Broke, Chairman of the "Khaki Prisoners-of-War Fund."

Although it is to be foreseen that, the more our armies participate in the battles against the central powers, the more American soldiers will become prisoners of war in Germany, yet, this appeal is made to the American public, confident that even with the many burdens existing, means may be found to make the lot of British prisoners

of war in Germany more tolerable. There are many thousands of British prisoners in Germany today that are living almost exclusively on the parcels-post consignments from home, which consist mainly of food; and all the stories that come to us indicate that the food shortage existing in Germany affects the prisoners of war even more than it does the German people.

Under these circumstances, and, while, of course, we shall have to do all in our power, to support and supply our own American soldiers with food, still, we are mindful of the fact that this war against the militaristic and autocratic powers is fought out, not by the British, the French, the Italian, the American troops, but, by all the nations who desire to defend the cause



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Damage to Face Successfully Covered.

of civilization and to secure safety and healthy progress of the nations.

From this point of view, the call for aid on the part of the "Khaki" Prisoners' of War Fund is not a special one; our aid may be extended to them, even as it is to American soldiers. Even though we give as much as we can to all the funds that are being collected, and give it gladly, nevertheless, there may be a few dollars or one dollar or a quarter dollar that we may

turn over to this worthy fund. Contributions may be sent to the Honorable Secretary, "Khaki" Prisoners' of War Fund, 11,



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Facial Disfiguration Removed, in English Hospital.

Southampton Row, London, W. C. 1., England.

WORRY PREDISPOSING TO SHELL-SHOCK

W. Frank Persons, director-general of the Department of Civilian Relief, American Red Cross, who has been spending four weeks with the American Expeditionary Forces in France, claims that frequent cheerful letters from home help to make American soldiers less subject to shell-shock.

"Any worry about the condition of his dependents or relatives tends to put a soldier into a condition where he is subject to shell-shock," said Mr. Persons. "I have this on the authority of eminent specialists that are dealing with such cases in the military hospitals. A soldier who is untouched by bullet or shell may, from shell-shock, return to his trench in such nervous condition as to require hospital treatment and a long rest. The best insurance against

this serious byproduct of modern warfare, the physicians say, is, for the man to go over the top or meet a charge in a buoyant, untroubled frame of mind, in which his sole concern is the serious business at hand. Cheerful letters from home help to produce the proper mental attitude, but, confidence that the home-folks lack for nothing is an essential foundation.

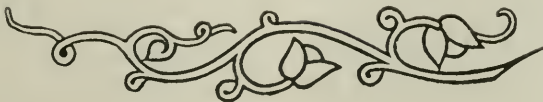
"That our men may be protected as far as possible from worry about their families and that nothing else that will maintain the morale be left undone, it is obvious that the American people must see to it that no family of a soldier lacks for anything that will enable it to write honestly cheerful letters abroad.

"To the American Red Cross, has been given leadership in this vital undertaking. With utmost sympathy, its 40,000 workers, organized as the home-service sections of 5,000 Red Cross chapters, have come already into friendly touch with 300,000 families of soldiers. Whatever the need, this



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Attachments to Correct Facial Disfigurements.

need has been met at once either directly by the home-service section or in cooperation with local agencies."



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Social Evil and Its Results

AT the base of all life, are two instincts—self-preservation and procreation. Without these, all life would perish from the face of the earth.

The first operates without conscious effort. The other involves consciousness, and, in the human phase, it suffuses the organism throughout the larger part of life. With the male, it is dominant. That this dominance assumes a larger lawlessness, brings up a question of morality, with which in the present consideration I have nothing to do. The fact of that lawlessness is back of the condition that has come to be known as the "social evil."

The social evil is as old as society, coeval with mankind. History goes not back to a time when statutes, confessedly human or professedly divine, were capable of controlling this evil.

The history of humanity—its poetry, its romance, its very religion—is little more than a Joseph's coat woven in the warp and woof of Love and Passion in the loom of time.

The evil itself interests the physician, and should interest society, solely as a source of disease. The question, really, before civilized peoples everywhere, and the one that concerns the entire medical profession, goes directly and solely to means whereby the evil may be so treated as to cease to be a cause of physical corruption.

When I say "physical corruption," my view goes further than the immediate persons first infected. It includes thousands of innocent people—wives, mothers, infants—for, the unspeakable taint is ignorantly passed on to these other victims, and the sins of the fathers are actually visited upon their children unto the third and fourth generations. This black cloud hangs low over many homes. Its noxious edges touch the health and safety of whole families, even of whole nations. It is a plague,

ever present, diffused as widely as humanity itself, and far more deadly, more difficult to deal with, than the plague of consumption. These two, the white plague and the black, are the deadly enemies of our modern life.

In dealing with the white plague, medical art and sanitary science have had free play. The results have been of inestimable value, though they are as yet far from complete. Doctors, humanitarians, and sanitarians have had free scope of discussion and complete liberty in the matter of precautionary as well as curative instruction and action. There was nothing that could not be freely spoken of in terms of itself, anywhere, in any hearing. A course of education by counsel, of eradication by treatment, open and above board, was and is, not only possible, but is invited.

See what has been done. The white plague—tuberculosis—one of the most deadly in the long catalog of human afflictions, is being abated, not gradually, but, rapidly. It is not too much to hope or even to expect that in another quarter century, or half century at the furthest, it will have almost if not wholly disappeared.

But, in the case of the other plague, the one we call the black, what has there been done? Through the operation of one of the strangest and most unhappy anomalies in the better life of our time, the evil is abhorred and decried, but, restriction and preventive action has been, and is denounced and opposed by those very classes whose complaint against it is loudest. Prudery often amounting to prurience surrounds and hampers every attempt to do the things that are necessary to be done for its abatement. The eyes of the religious are obstinately closed to the facts that must be recognized and dealt with.

The one thing clamored for by the virtuous-ignorant is the one principal thing

that can not be accomplished. I mean, total suppression of the wretched trade from which this dreadful scourge has its perennial flow. That trade can not be suppressed by any human agency. You might as well try to cure a virulent ulcer by sealing its surface; an operation that would simply force the poison through all the gates and alleys of the body. Let us clearly understand that one indisputable, immovable fact. Common sense, based upon experience, obliges acceptance of the unfortunate fact that prostitution can not be abolished. No human law, in my opinion, can be enacted that will greatly impede public or, what is more dangerous, clandestine prostitution.

This understanding is a necessary precedent to any course of action from which amelioration or abatement can be hoped. All the clamor that puritanical spinsters, cloistered doctrinaires, and sentimental purists may raise against it will change it not one whit. Why?

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Lubricity is the product of imaginative excitation operating upon the procreative faculty. The story of the world, so far as we can trace it, has shown that all civilizations, as they reached higher and more complex forms, have developed polygamous practice, either with or without the sanction of law. Emancipation from primary conditions of brute labor has always brought increasing leisure and ease, with an accompanying spread of indulgence of all the appetites. Our own enlightened state shows very slight advance in that respect—if any—over Nineveh and Tyre. One has but to read the report of the late municipal vice-commission of Chicago to learn that this statement is abundantly true.

A few thousand years are all too short to bring any measurable change in human character, tastes, appetites, and habits. The differences are racial only, and racial differences arise from climate and the influences of physical geography. Certain fundamental qualities and propensities are common to all. The impulse of procreation is the most common. It is universal. In some parts of the world, as thought grows freer and fancy finds time from hard pursuits to dwell on luxury, it diverges from its merely natural and necessary purposes and finds expression in promiscuity. Look

back over the level of two thousand years to the groves of Daphne, and see how this indulgence was entwined with a religion and made lubricity no more a thing immodest than a church fair of our own times. In times more ancient and in other lands, worship was directed through phallic emblems of the frankest representation. We are not so far removed from even those days that we have left their traces all behind us. Maids and matrons going into church pass through a door over which towers a spire, brought down from the ages when the priapus marked the place of devotion, while the arched portal itself still speaks of the "door of life"—or yoni, of yore—the symbol of female procreancy. We are not removed *at all*, in the true sense.

There is a relativity in all things. Time means much to those who count it; nothing—in the life of the universe or even of this, our planet. It is because our retrospect of history is in the horizontal plane that we call things ancient and think them different. Greece with her glory, her literature and her lusts was comparatively modern. Undoubtedly her people had their own retrospect of other peoples, who looked to them as in turn they themselves now look to us, and as in our turn we shall look to the peoples living a few thousand years hence. To get a truthful view, it is necessary for the mind to rise high enough to look downward upon the whole terrain and all the peoples enclosed in its horizon. Take that position, and the difference between peoples in any corresponding stages of advancing life and enlightenment will be found to be very slight indeed. In the underlying, elementary things, they are all alike—and we are like them all.

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And, in every stage of development at all corresponding with that which we find ourselves, there persisted this same social evil, having for its cause the nagging impulse of sex in the men; and having in its many strata one stratum deep down—dark, noisome and pestilential—where dwelt the women of a great army of the lost: always an outcast army, always despised, always through the exercise of its one function preying upon the vitals of the people, always tainting the whole stream of life with the same horrible poison. And *always owing its existence, its presence in all times*

to the demands, the insistence, the rude enforcements of men—to the blind urging of the protozoid. Misery, desolation, and death are its concomitant powers. Corruption is its one product. The false lure of an unreasoning pleasure is its very forehead. Its feet take fast hold upon hell.

Let us be fair. Puritanical condemnation is not. These dangerous, miserable women of short and fevered life, to whom the world holds out no hope, for all their horrible estate, are women still. I can not present their case better than in the words of Lecky, that great and openminded English moralist, who speaks of the type as "that unhappy being whose very name is a shame to speak, who counterfeits with a cold heart the transports of affection, scorned and insulted as the vilest of her sex, and doomed for the most part to disease and abject wretchedness and an early grave." And, continuing: "She is in every age the perpetual symbol of the degradation and sinfulness of man. She remains, while creeds and civilizations rise and fall, the eternal priestess of humanity, blasted for the sins of the people." Hear his solemn plea for her, as being at the same time the ultimate type of vice and ultimately the most efficient guardian of virtue. "But for her," he says, "happy homes would be polluted, infanticide would increase, unnatural and most harmful practices would abound." I can not go as far as Lecky does, when he says that prostitution acts as a safeguard for the innocent. This is contrary to experience. It is an insult to such degree of civilization as we have already reached to say there are men enough in any city whose passions are so violent and uncurbed that but for the existence of public prostitution they would ravage and destroy till they became a public menace.

Dr. Denslow Lewis has well said: "All supply is regulated by the demand. If there were no demand for the harlot she would not exist. She is among us, because our civilization, education, and religion have not yet succeeded in teaching the possibility of continence, the advisability of charity, and the dignity of virility. When that is done, the first step will have been taken toward the regulation, not of prostitution, but, of that dominating force in our nature known as sexual instinct. For the present, the prostitute is an integral

part of our social fabric and her depravity and degradation are possible *because man insists.*"

"After all is said and done, the social evil is a man—not a woman problem—commercialized by man—supported by man—the supply of fresh victims furnished by men—men who have lost that first instinct of chivalry and that splendid honor for womanhood where the destruction of a woman's soul is abhorrent and where the defense of a woman's purity is truly the occasion for a valiant fight."

Let us still be fair. The wanton is a fact, constant in the whole story of the world. Her pitiful, sordid trade is a concomitant of life itself, in all organized forms of society, and the reason for that lies, not with her, but with man, the primary hunter. If the suffering of which she is the instrument is to be abated, we must look with level eyes upon her case and its reasons why, and deal with it with unfevered hands. In that way, only, can we accomplish any measure of safety. This is a necessary thing to do, for, it is only too evident that "the stain of disease is spreading."

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Alcohol, tuberculosis, and venereal diseases are the three great plagues that afflict humanity. In the presence of the last, we remain impassive and indifferent; efforts to crush out the evil have proved futile. Moral crusades have been made through the strong arm of the law and police, to restrict prostitution, but, with but temporary and only partial success. Experience has amply proven that legislative force can not suppress the evil; that no police or sanitary network is fine enough to serve as a dragnet for the offenders. All sanitary regulation to stamp out the disease, all moral crusades to purify the social atmosphere, and all repressive measures employed by the state to crush out the evil have been directed against women alone. The man may emerge from the mine of dissipation without a spot of social shame upon his character; he may return from his haunts of vice and mingle freely with the virtuous women of his social set. The man reeking with immorality should no longer with "unabashed forehead" enter the sacred circle of virtuous women and consider himself not un-

worthy to ask the hand of a pure young girl in marriage.

As long as men may, without scruple, without violation of social laws, with what one might term the tacit encouragement of society, freely consort with immoral women, without incurring any social stigma, so long will they continue to infect innocent women, whom they marry, with diseases that soil them, that poison them, and which kill them.

At the present moment, according to no less an authority than the American Society of Sanitary and Moral Prophylaxis, "fully one-eighth of all the disease and suffering which afflict humanity is due directly or indirectly to incontinence." Incontinence, that is, among men.

A committee of the New York County Medical Society, appointed in 1901 to investigate the subject, reported as "a conservative estimate" that, of the one million people walking the streets of New York, at least 200,000 were infected with venereal diseases. Doctor Bulkley's calculation was that New Yorkers affected were increasing at the rate of 50,000 annually. In a paper published in the Ohio Sanitary Bulletin for March, 1906, Drs. Fred C. Valentine and Terry M. Townsend, of New York, said that, though the figures given must understate the truth, yet, if we accept them, we must also accept that today there are in the United States some 16 million people infected with venereal diseases. The same careful estimate would give these polluted ranks an increase of $3\frac{1}{2}$ million annually.

Dr. P. J. Haigis, of Foxboro, Massachusetts, quotes expert authority for the statement that, of the 14,000,000 young men in this country today under the age of thirty, 50 percent have some venereal disease and that from 75 to 90 percent of all our men have contracted some taint. Another physician of the very highest standing, Dr. Charles Edward Nammack, president of the Guild of St. Luke, New York, presents these appalling figures: Venereal disease, he says, causes 90 percent of all cases of locomotor ataxia, 75 percent of all ocular paralysis, 80 percent of all cases of paresis, and 42 percent of all abortions, besides being the cause of death in from 60 to 80 percent of syphilitic children born alive. One form of venereal disease causes 75 percent of all pelvic inflammations among

married women, 80 percent of blindness in the newborn infants and 15 to 25 percent of all cases of blindness.

I do not care to go further in cataloging the extent and spread of these infections. I cite these as my reasons for regarding the condition as a disease-evil, primarily, and only in a secondary sense as social. I have no sympathy whatever with the impractical demands of excited purists who do not know the world they are living in and who demand forcible suppression or abolition of this evil. It can not be suppressed or abolished, any more than can be anything else having its cause deeply implanted in our physical natures. The much less serious evil of alcoholism has successfully defied suppression, even when the broadest powers have been invoked. The appetite here involved lies far deeper down than the appetite for strong drink, and its persistence, the awful effects that come of it, are by that much further beyond the reach of prohibitive enactment or suppressive measures of any kind. "By sin came death into the world," and this evil has its root in primal sin. It is as unevadable, as little subject to organized abolition as death itself.

When I use the word sin, I wish to be understood as implying an infraction of those plain laws by whose observance alone health can endure. The dogmatic meaning has no place here. The animal act, the abuse of which causes the evil, is as natural as any other animal act, and as necessary as the act of nutrition. Without either, life would soon fade out. You have to go back to the primordial bioplasm before you see an example of reproduced life without it. Of all living organisms, the toadfish is the only one still possessing the power of parthenogenesis. We are hopelessly in advance of the toadfish. Your frantic advocates of suppression or abolition would have to herd the race back down that immeasurable road before they could get us upon that level; and I gravely doubt whether any of the people would care to assume the independence of Hermaphroditus, with all that would imply. We have to deal, not with theories nor clamors, but, red-blooded realities, setting aside sentiment, as such, and work out by rational, practical methods the utmost possible deliverance from the most ex-

tremely dangerous of all prevailing diseases.

How are we to do this?

The answer is short and emphatic: By recognition, regulation, and education, and by better economic conditions. Now, let me say that recognition is not sanction. Recognition is not legalized approval. It simply means, in regard to prostitution, that we acknowledge its existence, as we are forced to do in cases of murder, rape, arson, degeneracy, imbecility, poverty, and other crimes and deplorable conditions.

"I believe our twentieth century," says Doctor Lewis, "has so far advanced that we are willing to give even the prostitute a square deal. We no longer cut off her ears or affix the scarlet letter. We treat her fairly, for, after all, she is a woman following the dominant instinct of the sex. If we restrict her residence or if certain police regulations apply specifically to her,

we simply force her to submit to personal inconvenience and occasionally to interference with personal liberty, for the benefit of the body politic. We regard her specially as a source of contagion; if we insist upon quarantine, it is because we wish to minimize the danger of infection to the community. The important fact, in relation to the prostitute is, not that we decide to do this or to do that with her—it is a hopeful sign of the times that we are willing to do anything with her except condemn her or, what is worse, to ignore her." Brothels no longer are the chief factor in prostitution. The character of prostitution is changing and the methods of dealing with venereal diseases must change. The future, it is now beginning to be felt, belongs neither to the police regulation of prostitution nor to "laissez-faire" indifference, but, to the general sanitary control of disease on the basis of the common law.

(To be continued in October issue)

OPPORTUNITY

*Master of human destinies am I;
Fame, love and fortune on my footsteps wait.
Cities and fields I walk; I penetrate
Deserts and seas remote, and passing by
Hovel and mart and palace soon or late,
I knock unbidden ONCE at every gate!
If sleeping, wake; if feasting, rise before
I turn away. It is the hour of fate!
And they who follow me reach every state
Mortals desire, and conquer every foe
Save death. But those who doubt, or hesitate,
Condemned to failure, penury and woe,
Seek me in vain, and uselessly implore;
I answer not, and I return no more.*

J. J. INGALLS.

Among the Books

VEDDER: "SYPHILIS"

Syphilis and Public Health. By Edward B. Vedder, A. M., M. D., Lieutenant-Colonel, Medical Corps, United States Army. Published by permission of the Surgeon-General, U. S. Army. Philadelphia and New York: Lea & Febiger. 1918. Price \$2.25.

The importance of the subject of syphilis cannot be too highly emphasized. It is one of the most prevalent of all infectious diseases, causes an incalculable amount of suffering and economic loss, and, because it has so far eluded sanitary control, it is a constant menace not only to the licentious but to the clean-living public as well.

The pernicious influence of syphilis upon the health of its immediate victims and, worse by far, upon their progeny, has come to be understood only since the Wassermann test was applied as a matter of routine to hospitalized and dispensary patients in large numbers. What had been suspected before by some far seeing pathologists and clinicians, then was proved indubitably, namely, that syphilis is the real cause of death in all cases of paresis, locomotor ataxia and aortic aneurism, in many cases of cerebral hemorrhage and apoplexy, organic diseases of the heart, liver and kidneys, and that it is a contributory cause of death in a host of other conditions, including, perhaps, one-fifth of all cases of pulmonary tuberculosis. This fact alone should be sufficient to make it incumbent upon every physician, especially every general practitioner to study the disease syphilis in all its phases and manifestations, in all its malignant and disastrous consequences. It is for this reason that the present discussion of the relation of syphilis to public health deserves careful study and attention. The author has inquired into the incidence of the disease; he has secured accurate information as to the various methods of transmission; and discusses the practicability of the different methods that may be suggested for preventing this transmission. In recent years,

much new light has been thrown upon the entire chapter of venereal diseases, and the lessons to be learned therefrom should be utilized for the greater good of humanity. The author's painstaking researches and discussions merit the fullest acknowledgment and his book should be studied carefully by every physician; for, every practitioner, no matter what his specialty, comes in contact frequently enough with one or another of the daughter-affections of lues venerea.

LYDSTON: "IMPOTENCE AND STERILITY"

Impotence and Sterility with Aberration of the Sexual Function. And Sex-Gland Implantation. By G. Frank Lydston, M.D., D. C. L., Chicago: The Riverton Press. 1917. Price \$4.00. Sold by subscription only.

A book on aberration of sexual function, by Doctor Lydston, must carry weight because of his wide experience and year-long studies in diseases of the genital organs. It may be remarked, by the way, that Doctor Lydston was one of the first to extricate genitourinary diseases, or, rather, those unfortunates afflicted with them, from the clutches of irresponsible quacks and that the recognition of this branch of the healing art, as a legitimate specialty of medical practice, is owing largely to his persistent efforts.

The outstanding feature of the author's argument is, that he has brought sexual aberrations and functional abnormalities into causal relation with disturbances of the internal secretions; which at once suggests a definite remedy. To quote: "If the author's view be correct, sexual perversion and inversion—with or without physical aberrations—are purely biochemic in origin, and, if taken early, susceptible of cure by implantation of sex-glands, thereby adding to the economy during the period of sex development, a certain quantity of a new and better quality of sex-hormone. The author is convinced, moreover, that there is a great advantage in the fact that

the added hormone usually is of an alien strain. So logical does the foregoing seem to the author, that he believes that a certain proportion of cases of perversion and inversion, if treated prior to adult age, are hopeful cases for the procedure."

The considerations of sex anomalies, occupying about two-thirds of the book, are followed by the discussion of sex-gland implantation in which the author is a pioneer. It will be recalled that he had sufficient faith in the correctness of his theory to perform an operation on himself in order to test the feasibility of the procedure; and with very remarkable results in various directions. The chapters on this topic are of great interest, if only for the reason that the operation has given at least encouraging results in the treatment of dementia præcox. If the author's enthusiasm is justified, and if his theory is well founded, as seems to be the case, the possibilities of the operation suggested by him are far reaching and may make possible successful treatment of many abnormal conditions that now are beyond our active influence.

The doctor's experimental work primarily, and, secondarily, his clinical observations of his method of gland implantation suggest that the method will be valuable in anemias and conditions due to presenility. Doctor Lydston believes that in cardiovascular disease sex-gland implantation is likely to prove of great service. The illustrations contained in the book comprise some remarkable microphotographs, notably one showing nascent spermatozooids, and several in which the hormone-producing cells of Leydig are clearly shown in sections of glands which had been implanted and subsequently, removed at various times.

The subject matter dealt with in the volume before us, naturally is decidedly difficult to treat. Yet, the author has succeeded in keeping the text free from all objectionable or offensive expressions. The Reviewer recalls a discussion of this book, in another journal, in which it is suggested that it seemed to have been written for the purpose of supplying unwholesome thrills to the prurient-minded lay-reader. Such a charge is as undeserved as it is ill-founded. There is nothing said that is not unobjectionable in form and expression. The entire discussion is dignified and in keeping with the importance of the subject. Physicians, as well as jurists and educators,

also social workers, may well study this book with great profit to themselves, and, indirectly, to those in their charge.

SIMON: "CLINICAL DIAGNOSIS"

A Manual of Clinical Diagnosis, By Means of Laboratory Methods, For Students, Hospital Physicians and Practitioners. By Charles E. Simon, B. A., M. D. Ninth Edition, Enlarged and Thoroughly Revised. Illustrated with 207 Engravings and 28 Plates. Philadelphia: Lea & Febiger. 1918. Price \$6.00.

At the present time, the physician who tries to practice without the employment of laboratory aids deprives himself of much useful assistance that would enable him to serve his patients much better than he can otherwise. The course in clinical pathology, indeed, is one of the most important and practical studies that students have to pass, and that physicians must continue throughout their years of practice. For this purpose, of course, suitable textbooks and guides are a primary consideration, and it needs only to announce that a new edition of Simon's manual has appeared to indicate one textbook that every physician can employ with much satisfaction.

MALTBIE: "PRACTICAL PHARMACY"

Practical Pharmacy for Pharmacists and Physicians. A textbook for students in medicine and pharmacy. Second edition. By Birdsley L. Maltbie. New York: The Druggists Circular. 1918. Price \$3.00.

The first edition of this book was prepared in order to provide for students and practitioners information, in convenient form, that otherwise would have to be searched out laboriously in the cumbrous textbooks, or which is offered, in but fragmentary form, in brief compends. The need, especially on the part of practitioners, of more complete pharmacological knowledge has been great for many years, ever since the actual value of drug-medication has been called into question by certain authors following the teachings of the younger Vienna school. The first enthusiasm engendered by the brilliant successes of modern surgery seemed to make non-surgical treatment of virtually any disease a useless waste of time, and physicians who still retained a faith in suitable remedies properly administered were few, and often they appeared called upon to, almost, apoli-

gize for their antiquated methods. However, the pendulum has commenced its backward swing some time ago. The value of proper drug medication is again being acknowledged; and, now the necessity of exact and correct information becomes all the more urgent. Physicians owe thanks to Mr. Maltbie for the excellent textbook which he has prepared, since it is of actual, not of purely academical use. The second edition differs from its predecessor mainly in that the changes in the Ninth Revision of the United States Pharmacopeia have been incorporated. The book will be found a very serviceable working-manual, especially for those physicians who, for whatever reason, dispense their own remedies. But, for the prescribing physicians also, the information contained in its pages will be of service, as it will help to guard them against many errors in prescribing.

"PRACTICAL MEDICINE SERIES"

Nervous and Mental Diseases, edited by Hugh T. Patrick, M. D., and Lewis J. Pollock, M. D., being Vol. X of *The Practical Medicine Series* 1917. Price \$1.35.

Skin and Venereal Diseases, edited by Oliver S. Ormsby, M. D., and James Herbert Mitchell, M. D., being Vol. IX of *The Practical Medicine Series* for 1917. Price \$1.35.

General Medicine, edited by Frank Billings, M. S., M. D., assisted by Burrell O. Raulston, A. B., M. D., being Vol. I of *The Practical Medicine Series* for 1918. Price \$2.25.

We have often referred to the usefulness of this excellent periodical publication in which the notable contributions to current literature are reproduced in a form that is particularly serviceable for the general practitioner. *The Practical Medicine Series* is published in eight annual volumes and covers the entire field of medicine and surgery, each volume being complete on the subject, to which it is devoted, for the year prior to its publication. The arrangement in several volumes makes it possible for those interested in special subjects to buy only those parts that they desire for their own work. Yet, it seems to the Reviewer that the general practitioner would here just find that information concerning the specialties that he requires to secure and maintain a wide and general outlook over the whole field of medicine; while, on the

other hand, to specialists there is afforded in this series a ready means by which they may keep in touch with the whole field of medicine and surgery, thus avoiding becoming one-sided and thereby limited unduly in the practice of their particular specialties by which limitation their clinical sense inevitably would become stunted.

WHITE: "LECTURE COURSE ON NATURAL METHODS"

A Lecture Course to Physicians on Natural Methods in Diagnosis and Treatment: Aids to Humanity Helpers. Seventh Edition, Revised. By George Starr White, M. D. Los Angeles. Price, \$15.00.

Doctor White is well known to many physicians for the ingenious dynamic methods which he employs for the diagnosis and treatment of many diseases. He has recently elaborated his previous lecture courses into one large volume embodying the information that he formerly communicated to his pupils directly. This book contains an immense amount of information on methods that are not usually found in orthodox textbooks. That does not mean that they are "no good." Rather, on the contrary, surprising results have been secured with them. To the many students of Doctor White, his latest work will be a welcome addition to their library.

McKENZIE: "RECLAIMING THE MAIMED"

Reclaiming the Maimed: A Handbook of Physical Therapy. By R. Tait McKenzie, M. D. Illustrated. New York: The MacMillan Company. 1918. Price \$2.00.

This little volume dealing with the methods employed for rehabilitation of wounded soldiers is uniform with the "War Manuals" and presents authoritative information on the subject with which it deals. The topics are so many and so diversified that a detailed review is impossible. However, the methods are those found most useful. They are explained clearly and concisely, and the excellent illustrations accompanying the text serve to impress the lessons more firmly.

"FRENCH MEDICAL VOCABULARY"

Through the courtesy of the publishers, P. Blakiston's Son & Co., we are in receipt

of the little "French Medical Vocabulary and Phrase-Book," prepared by Joseph Marie and distributed with the compliments of the publishers. This little pamphlet contains about 2,500 medical words in frequent use, practical reference-tables, and numerous phrases helpful in giving first aid to the injured. The words listed are well selected, and the Reviewer notes with satisfaction that no attempt has been made to visualize the mode of French pronunciation by any phonetic method. The little pamphlet is very handy for carrying in the pocket, and we advise physicians to ask the publishers for a copy.

"THE MEDICAL CLINICS OF NORTH AMERICA"

The current number of *The Medical Clinics of North America* is the Chicago Number and presents, as always, much interesting information. The far reaching importance and the disastrous consequences of syphilis infection are shown in a clinic of Doctor Mix on aortic regurgitation, aortitis, and aneurism on a syphilitic basis; also in the clinic of Doctor Elliott on syphilis of the aorta. Doctor Strouse discusses a case of juvenile diabetes in twins, also the Karell treatment of edema, and the importance of details in the treatment of angina pectoris. Radium treatment of leukemia is described by Doctor Elliott, while Doctor Tice speaks on epidemic respiratory infection. There are other interesting clinics in this volume, but, the titles cited will be sufficient.

The Medical Clinics of North America is published bi-monthly by the W. B. Saunders Company, the subscription price for six volumes a year being \$10.00.

"PROGRESSIVE MEDICINE"

The current number of *Progressive Medicine* contains an interesting review on hernia, which seems to occur with increasing frequency during wartime. Professor Koenig, of Marburg, regards the loss of adipose tissue, due to changes in the ordinary diet, responsible for this fact. The

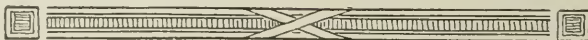
loss of weight, particularly of adipose tissue, together with an unusual amount of physical strain, he believes, readily explain the frequency of hernia since the beginning of the war. A large collective review in this number is devoted to diseases of the abdominal organs, especially the stomach. In the abstract of gynecological literature, we read, somewhat to our surprise, that the retention of a portion of ovarian tissue or its transplantation to the abdominal wall is not a positive preventive of "ablation symptoms." Whether this observation can be verified or not will remain for further investigations to determine.

Progressive Medicine is a quarterly digest of advances, discoveries, and improvements in the medical and surgical sciences, and is edited by Prof. Hobart Amory Hare, assisted by Dr. Leighton F. Appleman. It is published by Lea & Febiger, Philadelphia and New York. The subscription price is \$6.00 per annum.

"TOPICS OF INTEREST TO MIDWIVES"

An unpretentious little journal is being published, since January of this year, by our old friend Dr. Ferdinand Herd, of Chicago, the author of "Beauty and Motherhood," "The Care-Feeding of the Baby," and other books. This journal is devoted to the post-graduate instruction of midwives. With these, as with all others following the vavstudy is necessary if they desire to give the best services that are possible. To midwives, is entrusted a large share of the nation's greatest asset, that is, the health and lives of the multitude of mothers who come to them for advice and help during the most important periods of their lives. These mothers deserve the best attention, and they should have it.

It is to aid the midwives in their important task and to enable them to do justice to this great work that the little journal in question is being published. To physicians, also, it will prove of interest. It may be secured from the editor, 30 North Michigan Boulevard, at a subscription rate, outside of Chicago, of \$1.00.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6394.—Pregnancy or Phantom Tumor?" H., Oklahoma, desires our opinion in the case of a woman, forty-five years of age, in good health since, some fifteen years ago, she had a cystic tumor and the left ovary (also cystic to some extent) removed.

The last natural menstrual period was around the last of December. No more flow till May. Shortly after the period in December, she noticed that she was "getting flat" in the abdomen, as she expressed it. Then, after a short time, the abdomen began to enlarge gradually and about the last days of April felt what was diagnosed as a slight quickening. On May 4, she had a slight hemorrhage, which lasted for three or four days, and very hard pains, simulating labor-pains. As our correspondent, and also another doctor, had made the diagnosis of pregnancy, he had her removed to a hospital, to try to obviate an abortion. The labor-pains continued at intervals for three days, until very slight dilatation of the cervix was made, whereupon they ceased entirely. She has had hemorrhages each month since then, but, her abdomen has continued to enlarge and to assume a typical pregnant form. She has the painless contractions which usually or always accompany pregnancy; and, as for movements, the most she has ever felt to speak of is rather a turning motion with, at times, a very slight tapping or fluttering. Her health otherwise is good, color fine, and appetite the very best, and at no time has she been subject to the morning vomiting.

"As she has quite a thick abdominal wall," the Doctor continues, "it is rather difficult to outline anything with certainty. However, by pressure upon the abdominal walls, the contents of the uterus can be felt

very distinctly, except that the shape can not be defined. But, the abdomen is not soft, as it would be supposed to be were this a tumor, and, after the painless contractions, though the walls will be relaxed and pliable, the outline of the uterus will be found to be hard. The breasts are discolored around the nipples, and contain milk; also there are the typically shaped abdomen and the characteristic 'swayback.'

"When at the hospital at the time the cervix was dilated, when she was put under ether, the abdomen did not become 'flabby,' as is usual in the case of tumors, but, remained quite firm, except for the relaxing of the abdominal muscles. Still, the two hospital doctors said, 'No pregnancy'; although they would not say that it is a tumor."

Frankly, doctor, with the limited data at our disposal, we are unable to solve the problem you present. You must bear in mind that you have had this woman under constant observation during the first and second trimesters and well into the third, and, yet, are unable to decide positively whether she is pregnant or not. Again, you state that the physicians at the hospital advanced the opinion that pregnancy did not obtain, but, still would not say that a fibroid or other tumor is present. There is, of course, little doubt but that the picture presented by you is that of pregnancy; however, it must be borne in mind that many women, especially when approaching the menopause, imagine themselves pregnant, that the abdomen enlarges, the menses cease, they feel the movements of the child and even go into labor, having typical pains. Pseudocyesis, "grossesse nerveuse," as the disease is called in French, has even

baffled the diagnostic ability of the ablest surgeons and accoucheurs.

Nevertheless, DeLee states that the positive signs during the second trimester are so definite that the diagnosis of pregnancy may be affirmed without question. "Although," he says, "some authors assert that conditions exist where one must wait until the physiologic end of gestation arrives, for a sure diagnosis, the writer has never met such a case." But, later he states: "Rarely it is impossible to make a positive diagnosis at the end of the sixth month, and in the third trimester all the signs become more apparent and more convincing."

In this stage (the third trimester), the menses continue absent and any show of blood now is either pathologic or means that labor is beginning. Morning-sickness usually is absent; active fetal movements are, as a rule, more pronounced, but, as a rule, the child quiets down as labor becomes imminent. The painless uterine contractions become more and more noticeable as the months go by, until, toward the end of the trimester, the uterus responds to very slight irritations. A careful examiner will now have no trouble to find movements of the child. Ballotement is not obtainable unless there is a great deal of amniotic liquor; still, partial percussion is easily elicited, especially in breech presentations. Direct palpation of the fetal body is plain and toward the end of the trimester is the same as during labor. One may now readily diagnose the presentation and position.

The fetal heart-tones (which we assume you have not been able to discover) are louder and more constant, and one is more likely to hear the funic souffle and active fetal movements. The uterine bruit is more intense and more disturbed. Lastly, the x-ray will always disclose the fetal skeleton.

DeLee, again, states: "Only gross carelessness will explain a mistake in the diagnosis of pregnancy during this trimester. Excessive fat in the abdominal wall, the presence of tumors, anasarca, and general peritonitis, in the author's experience, have caused much difficulty, but, have not rendered a working-decision impossible."

It appears to us that a really careful examination, bimanual and stethoscopic, will enable you to reach a definite opinion, but, should there remain a lingering doubt,

the x-ray will infallibly decide the presence or absence of a fetus.

Considering the excellent condition of this woman's general health, it would, it seems to us, be perfectly safe to await the date of natural delivery, having her enter a hospital not later than October 1. Should normal delivery occur, well and good. On the other hand, should abnormal conditions obtain, she will then be in the proper place to undergo such operation as may appear necessary.

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QUERY 6395.—"Uterine Malposition and Sterility." A. J. H., Honduras, relates the case of a married woman, aged thirty-five, who gave birth to a child four years ago, at which time a not very extensive laceration of the cervix occurred and which was not repaired. There was no perineal laceration. Examination shows a well-healed, scarred area over the lacerated portion of the cervix and a slight gaping of the os at that place. The fundus is retroverted, adherent, and can not be raised. There is no marked swelling or hypertrophy of the uterus; in fact, it seems to be nearly normal in size. There is no discharge, the periods are normal, and general health is good. The husband is about forty years of age, in good health, and his semen normal. Neither patient nor her husband have had any venereal disease. They wish to have another child and want to know why pregnancy has not occurred since the birth of the child four years ago. Our correspondent adds:

"I wish to know whether a laceration of the cervix, moderate or extensive, could, of itself, produce a condition that would make pregnancy impossible. As a matter of fact, does this accident, in itself, often or frequently or in the majority of instances, make future pregnancies impossible? Would a lacerated cervix, in conjunction with a retroverted, adherent uterus, necessarily render conception thereafter impossible? On the other hand, would the replacement of the uterus and the repair of the cervix insure another pregnancy, other necessary factors being normal? Can you cite literature or texts bearing explicitly on the subject of the relations between lacerations and retroversions and childbearing? What do you think should be done for this particular patient?"

It is absolutely impossible, doctor, for me to express an intelligent opinion as to the

probability of any particular laceration of the cervix, either moderate or extensive, preventing conception. We can, however, definitely state that the existence of such condition does not necessarily render the woman incapable of bearing children. As a matter of fact, a very large proportion of multiparas have more or less of laceration and uterine displacement. On the other hand, while replacement of the organ and repair of the cervix would render conception more probable, it would not be safe to state that such procedure positively would do so.

You will find the subject covered very fully in Ashton's "Practice of Gynecology" and other standard textbooks.

Bear in mind that a very large proportion of women bear one child only, the *Neisser bacillus* (conveyed by the husband) invading (during the puerperium) the pelvic viscera and setting up conditions that render further fruitfulness impossible.

You state that neither the patient nor the husband have ever had any venereal disease; still it is quite possible for the husband to have suffered a mild urethritis and honestly to be ignorant of the fact.

As the fundus is retroverted and adherent in this woman, surgical interference would seem to be indicated, unless by prolonged posturing, manipulation, and support the conditions can be overcome.

Let us suggest, doctor, that you read up as much as possible on the subject, then examine your patient and write us further. We assure you it will give us great pleasure to render every possible assistance.

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 QUERY 6396.—"Endometritis, Salpingitis, and Epilepsy." J. H., Arkansas, requests diagnosis and therapeutic suggestions in the case of a woman twenty-one years old and married about two years. "Weight, 120 pounds; height, 5 feet 3 inches; dark hair, blue eyes, clear complexion; somewhat constipated, menses regular, but, flow excessive, lasting from seven to ten days, stopping for some two or three days, then resuming, very painful and the blood dark; cramping during first two or three days. The right ovary is very tender and somewhat swollen; the left ovary also is somewhat affected. A tender spot exists about two inches above the kidney and one inch from the spine, caused by a fall about four years ago. From that time on, she has had something like epileptic fits.

Sometimes she has a few minutes' warning, at others, they come suddenly. The eyes begin to dilate, then her hands close up and she carries them to her cheek; tries to bite her knuckles; becomes very rigid; head goes back; limbs straighten and toes draw down; grits her teeth; pupils dilate and eyes roll back. It takes two strong men to hold her on the bed. These spells last from one-half to one hour, and she has from five to ten in twenty-four hours. After she relaxes, she seems to be in a deep sleep or coma for about one hour, unconscious most of the time. When she awakens, she complains of the right ovary and weakness. When she does not do any heavy work, she will miss those spells for a month or two. Appetite is not good.

"Her husband infected her with gonorrhea five months ago. Since then, she has suffered continually with her ovaries; the uterus is swollen, tender, and ulcerated. Kidneys act freely enough, but, there is some burning when she passes water. The bowels and stomach are tender and swollen. Heart action is weak. She has been confined to her bed ten days. Had a rise of temperature to 100 degrees, but this lasted only two or three hours."

You certainly have an unfortunate condition to deal with in this patient. In the first place, the young woman would seem to suffer from gonorrheal endometritis and possibly salpingitis. We doubt very much whether she will ever regain health until she has been operated upon. The sooner she is placed in the hands of a competent surgeon, the better, as it is possible that at this time sacrifice of the right ovary and tube will suffice.

The fact that she also has epilepsy is a very serious complication. The history would lead us to suppose, however, that the epilepsy followed an injury sustained some four years ago. We must, therefore, regard it as of traumatic origin. It is possible, of course, that there is some spinal injury, possibly a subluxation. Much might be learned from a radiograph in this case.

It is not at all improbable that the epilepsy will disappear after an ovariectomy; but again, remembering that this patient is epileptic and sustained an injury in the lumbar region, the entire pelvic condition may have resulted therefrom, and the subsequent gonorrhea, which we understand she contracted from her husband at a comparatively recent date (we assume that

there is no question that it was a specific infection?) may be really an unimportant factor.

Under the circumstances, we would strongly urge most thorough examination, preferably in a well-equipped hospital. If this is impossible, we would send a swabbing of uterine discharge and a specimen of urine (four ounces, taken from the mixed twenty-four-hour output, stating total quantity voided) to a competent pathologist for examination.

It is more than likely that the administration of the gonococcus, or better, an autogenous bacterin would prove materially beneficial.

Hot alkaline antiseptic douches should be given every night; immediately thereafter, a uterine bougie containing argyrol, 5 percent, should be introduced. If there is much discharge, protargol and hydrastine hydrochloride may be used. If for any reason a uterine bougie can not be introduced, employ a vaginal suppository containing 5 percent ichthyol, and 1 percent protargol.

The present writer is sending you a reprint of his article on the treatment of epilepsy and suggests that you read it carefully. Then, with the light derived therefrom, make a thorough examination of your patient, testing the reflexes, examining the spine for areas of tenderness, et cetera, and report your findings.

Were we in your place and the patient refused or were unable to enter a hospital, we should try to alleviate the pelvic condition first, then treat her for epilepsy. Thorough elimination is, of course, essential, and the patient must be very carefully dieted. It is a mistake to have "two strong men hold her down" during her attack. She would be much better off and the spasm would be less severe if a more moderate degree of restraint were employed.

You do not state whether she utters any cry before each spasm or whether she bites her tongue or injures herself in any way. Do not forget the possibility of a hysteric element here.

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QUERY 6397.—"Tumor of Mesentery?"

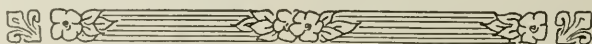
C. S. N., Alabama, writes: "I have a case of what seems to be a tumor of the

mesentery in a woman, who is single, thirty years old, and with good family history. She enjoyed good health until two years ago. Then, one day, when, coming home from work in an office, being told that ripe fruit would be good for her, she ate a large amount of fresh peaches. Following this, she was taken with pains along the left side, and this condition continues. I was called after she had had various treatments. I have given her tonics, soda, bromides, compound calcium elixir, sodium cacodylate, and other things, but, seemingly, with slight improvement. She has good elimination, her digestion is fair, and appetite reasonably good. I find nothing in her condition pointing to a different diagnosis, although I may have overlooked some symptoms."

With our very limited knowledge of the conditions existent in your patient, it clearly is impossible to venture intelligent therapeutic comment. If a tumor of the mesentery exists, surgical intervention may be necessary. On the other hand, if by any chance, while eating those fresh peaches, she swallowed a peach-kernel which has lodged in some saccululation of the intestine, gentle massage of the abdomen, high enemata in the knee-chest position, and a few doses of castor-oil might prove remedial; in fact, we should not hesitate to give a high oil enema followed by a quart or quart and a half of water at body-temperature.

Unfortunately, you do not state just *why* she was advised to eat a quantity of ripe fruit, although we assume it was for laxative action. Neither do you state the location of the "pain in the left side" or its character.

It would be an excellent idea, we think, for you to go over the woman very carefully and report your findings; at the same time, sending specimens of feces and urine (4 ounces taken from the mixed 24-hour output, stating total quantity voided) to a good pathologist, for examination. It may also be desirable to make an examination with the patient under an anesthetic in order to secure complete relaxation and eliminate the "defensive" muscular contractions.







Miss Mande Wetmore. Mrs. Josiah Evans Cowles. Miss Ida M. Tarbell. Mrs. Stanley McCormick. Mrs. Ira Couch Wood. Mrs. Carrie Chapman Catt. Mrs. Jos. R. Lamar. Mrs. Philip N. Moore.

The American Journal of **CLINICAL MEDICINE** *Dependable Therapeutic Fact for Daily Use*

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A Woman's Sphere

THE idea that "a woman's sphere is her home" is true absolutely and unquestionably, and the verity of this idea is the foundation of the woman's right to expand her undertakings in the direction in which they now are widening. Of course, when we say "home," we may mean one thing or another. What is "home"? Where does "home" begin and where end? Does home, and the woman's duties in relation to it, end at the lot-line, at the door of the apartment? By no means.

Throughout all animate nature—especially that which approximates the human kind—the male is the provider and defender of the family; he kills; the mother and her young eat. The human sex relationship includes the primitive, but, it is marred and scarred by conventions devised by mankind. These rules have outgrown from the erratic development of civilization. Primal man was a hunter, a marauder against his kind—force was the only law. The woman was not equipped for battle and was unfitted by the functions of her sex and by the fact that her young required her best. But, now, even in the presence of this greatest of wars, we see

that the relativities of the sexes have changed. Prosecution of the war is not on the battlefield alone. More and more it is of the workshop, the hospital. Back of it all, is the economic requirement that, if it fail, brings defeat and disaster to the fiercest, the best-trained legions.

The fact is, that the real struggle of life now is for existence—food, shelter, clothing. Woman's primal domain has broadened immeasurably. Let us be more specific.

We have asked, What is "home"? There was a time when the home was a cave in the rocks, when the man dragged home the prey he had captured in the jungle, that the nursing mother and the children might feed. In these, our times, the male goes into the economic jungle and earns what he can and brings it to the support of those dependent upon him. At that point, his primary obligation ends and the woman's begins. Her jurisdiction includes the care of her young and of the food and shelter. It becomes her duty to see to the food, and to do that she has the right and obligation to know about prices and qualities—and, mark well, this gives to her sex,

with its domestic obligations, the right to require and compel providing the right sort of food. Taken broadly, this means that the woman's household jurisdiction over food has so expanded,—so that she should have at least equal part in creating all of the governmental agencies that regulate the price and conditions of food. And it is the same with other things—fuel, water, clothing, light, everything that enters into the making of the home a home, indeed.

Now more than ever before, the home is the product, the resultant from external conditions. Consider that in former times the mother was the educator, preceptor, the guardian of her children. Now the public school has come to supersede and relieve her. Compulsory school attendance controls, and this means teaching about all the mother taught—household work and arts, sanitation, and sometimes sex-hygiene.

Now then, these things having been taken away from the woman, she has a right to go into the highways and byways of public life, of politics, not only to see to it that they are well done, but, in part to do them herself. The same is true of politics, health, and fire-service; they serve the home and are assistant to the woman in the home. And, moreover, no one can find the vanishing point where the interest of the woman of the home disappears in the matter of street and alley cleaning.

Thrift and patriotism are synonymous.

NON MINISTRARI SED MINISTRARE

A Chaplain's Prayer for Nurses and Physicians

Soon after the beginning of the European war, before the United States had entered it, a young Presbyterian preacher in charge of a small church in the Southwest got a leave of absence and went to France, as a helper on board a ship carrying horses and mules, and joined the ambulance corps. Later, feeling there was a need for able-bodied fighters, he went to London and entered an artillery-school. Upon his graduation from the school he received a commission as second lieutenant and was transferred to the Royal Field Artillery, and since the first of the year he has seen some strenuous fighting on the western front, with the trench-mortar serv-

ice; very recently, he was promoted to a captaincy.

The young man referred to is Captain Eliot Porter, son of Justice Silas Porter, of the supreme court of Kansas, and of Mrs. Silas Porter. He also is a nephew of Dr. and Mrs. George F. Butler.

Doctor Butler has kindly given us a copy of a prayer written by Captain Porter at the urgent request of Miss Pulford, an English woman in charge of the nurses in the American Hospital at Paris. When Captain Porter was in the ambulance service, he was injured and was sent to the hospital in question, where he had to stay in bed for three weeks. Miss Pulford, who was called "The Countess" by everybody, learned from the records the nature of the young man's civil occupation and urged him to preach a sermon for the nurses, but, this, under the circumstances, he declined to do. She, however, continued to urge him, reminding him that the nurses could not go to church; and, at last, he agreed to write a prayer for them.

"*Non ministrari sed ministrare*" (not to be ministered unto, but to minister) is the motto on one of the stained-glass windows of the hospital at Princeton, where young Porter once, when a student, was a patient. The parents of Captain Porter and his uncle, Doctor Butler, should be very proud of their son and nephew, the patriotic "sky-pilot", now captain in the Royal Field Artillery. Others, we are sure, will be glad to have presented the prayer as conceived by Captain Porter:

"O Lord, we make our prayer to Thee for those who serve—for nurses and physicians, those who give their labor and their skill to lessen ills of body or of mind—for those who strive, that laborers may find their work and guard their health, receive their juster wages, and live nobler lives—for those who feed Thy poor and shelter them—for those who go where ignorance is dark, to spread the light of knowledge—those who seek to bring Thy Kingdom into the hearts and lives of men, Thy help, and Thy forgiveness, and Thy peace. For these, O Thou Thyself, Most Merciful, for these and for all who minister we pray.

"Give them encouragement, for, those they serve too often want, or seem to want, in gratitude. Their work grows heavy, fails or seems to fail. Their ideals dim, their hopes are thwarted. Help Thou Them!

Renew their faith in Thee and in Thy children whom they labor for. Give them to see the good they do; help them to know the meaning that they bear, these souls who, like their Master, come to serve. Remember Thou His promise to the merciful. May their lives be truly blessed; may the world give back to them the mercy which they shed. Wherever tired shoulders strive to bear another's burden, be Thou there to aid; for, none can bear another's burden, being man. Work Thou through them: then, their labor shall not be in vain.

Thou art a God who lovest mercy and we pray through Him who bore the greatest burden. Thou wilt hear. Give Thou our prayer true faith and fervor: it shall have availed.

Luxuries as usual means a victorious Germany.
Save and buy War Savings Stamps.

THE INDUSTRIALLY FREE WOMEN

What's the matter with the American women? The answer is swift and certain—we men! It is a case of ingrowing brains. We have insisted upon placing woman on a throne, investing her in royal robes—yclept glad rags—and we say to her: "Dismiss all care from your thoughts. We shall do the thinking, the planning, the worrying, and the fighting. Just watch our smoke."

And with that we plunge into the conflict, intent upon winning the greatest possible share of this world's good things, that we may lay them at the women's feet. To illustrate the truth of this statement, take a walk along State Street and count the number of show-windows filled with delectations for women, and then those containing goods intended for men. You will find the proportion about 20 to 1 in favor of said favored sex.

Well, how does she take this? At first, with relish. She finds it nice to be appreciated and cared for. She appreciates ease and luxury to a degree we men hardly comprehend. But, is she satisfied? Not on your life! Those few of us who have really considered the matter have learned to realize that a full half of humanity's energies and capacities are stored in by the feminine half of our race, and this vast capital we allow to go unutilized.

Woman can not long be content to limit herself to the consideration of the four

Cs—Clothes, children, cooks, and church. The possession of capacity, mental or physical, carries with it the necessity of utilizing the same. We know that a muscular man must exercise and a brainy man must use his brains, but, we rarely realize how this applies to the women as well as to ourselves. Women turn, as a rule, to the profitless work of toiling up through the sliding sands covering the slopes of the mount of society. A sterile pursuit, with no commensurate object at the end, and rewarded but too often by the scanty efflorescence of pink teas, monkey-dinners, and poodle-dog soirées.

The women are, emphatically, not satisfied, and they are right. They demand a legitimate field for the exercise of such faculties and capacities as they may be possessed of.

To throw down the walls of conservatism and open up to femininity a wide field of activity, will prove to be, after all, the most important result of the great war. The need that is sweeping the men into the army suddenly gives woman a chance, of which she is quick to avail herself. By thousands upon thousands, she has taken clerical positions from which the men have been drafted. In the war itself, she is doing everything but carry arms—as nurse, ambulance-driver, chauffeur, worker in the Red Cross, the Y. M. C. A., and the Salvation Army, and similar organizations, in the laboratories, and even as actual member of the medical staff she has proved herself. Clear up to the front line she has pressed, and her assistance has been found invaluable. Moreover, in industrial life, she has displayed capacities scarcely dreamed of. Many thousands of machines are presided over by women. Many thousands of acres of land are yielding their crops to the agricultural efforts of women. Indeed, it is almost impossible to point to a field of human endeavor in which women are not displaying their capacity for replacing their battling men.

The Central States College of Pharmacy found itself seriously embarrassed by the inroads made in its classes. The managers took immediate steps to fill them by arranging for the training of women, and these responded in large number to the call. They are proving exceptionally well fitted for this work, their quick intelligence enabling them to grasp the instruction given

them far more readily than did the young men. They seem also to be peculiarly well adapted for the practice of pharmacy, and, in an avocation where accuracy, neatness and cleanliness are so essential, an inspection of their premises would send many pharmacists away with new ideas in their heads and new ideals as well. Incidentally, this has given the college the opportunity to improve its teaching staff by getting rid of some dead wood and replacing it advantageously.

And this is not a temporary condition. The old ones will never be restored. Scarcely anybody now has any objections to offer to woman's assuming the full duty of citizenship as based upon the ballot. It is certainly hers whenever she says the word. Woman stands today absolutely free, and fully equal in rights and privileges to man. We tender her a hearty welcome and testify to our appreciation of her as a comrade far and away above our estimate of her as a pampered slave.

Business as usual now may mean no business later.

NEW OCCUPATIONS FOR WOMEN

Simmonds College announces the graduation, in May and June, of women specially trained for serving as secretaries in hospitals and dispensaries or to physicians in private practice. Their training includes all the technical secretarial work and, in addition, a knowledge of medical terms, scientific foreign languages, and general special science as applied in the diagnostic laboratory.

This announcement brings to mind the fact that, in recent years, many young women have found remunerative and pleasant employment as assistants in biologic laboratories, where they attend to the routine work of making transplants of bacterial cultures, prepare culture-media, and in other ways assist the research-workers in the laboratories, by relieving them of the tedium of the purely routine work.

Here, then, are two occupations among various others that recently have become accessible to intelligent young women who do not care for the other pursuits that formerly were available for them. Both positions—those of secretary to professional men, especially physicians, and of labora-

tory-assistant—offer various pleasing advantages, and we believe that many young women obliged to earn their living will find these occupations preferable to office-work or to employment in stores.

Physicians have many opportunities of directing their young women patients or daughters in the families of their clients in the selection of their future work. Of course, in every instance, the personal factor should be taken into consideration. Occasionally a young woman is met with who is, above all, suited to the hard and responsible life of a nurse. Such a one should be urged to enter the hospital for training. Others there are who find the best field for their activity in the home. A course of domestic science, with a "postgraduate course", as "mother's help", in a nice household, will fit them for their best work, which is, to make a home. Many of these make splendid domestics, and the time has long since passed when good domestics, or, in plain English, good "servants" were being looked down upon as an inferior race; for, the work of these women is just as dignified, while more difficult, than are many other lines of activity. Some girls, naturally, will drift into offices, into stores, into factories, and, finding there their level, are perfectly satisfied.

However, there are many young women whose ambition and thirst for an education has led them through the high school, but, who, through force of circumstances, find themselves unable to enter a profession, yet who would feel unhappy in any one of the occupations mentioned. Many of these would find a fruitful field of activity in assuming the duties of secretary or of assistant to a physician or surgeon or as a laboratory-worker. This might be extended; indeed, many of such young women have given great satisfaction as clinical assistants in which capacity their services are being valued very highly.

There is here another evidence of the rapid development of our social and economical conditions, and, we wish to urge physicians to advise the young women among their clientele in accordance with their inclinations, their fitness, and their adaptability to take up one or the other line of work, because we believe that in future women will play a far more important and far more commanding role in our daily

lives (outside of domestic relations) than they have done in the past.

Many are giving their lives; you are asked only to loan your money.

SAVING THE BABIES—A GOOD WAR POLICY

Writing to *The Chicago Daily News*, its Washington correspondent, Mr. Frederick J. Haskin declares that, the wholesale death of babies is the most sinister of calamities following in the wake of prolonged war, because it is the ultimate result of all other war evils and because it renders virtually impotent all efforts toward reconstruction. The babies of today are the nation of tomorrow—upon them will fall the task of guiding it through the rock-ridden channels of the next generation.

If the children of the present age are made strong, virile and adequately equipped, the nation will pass safely through the difficult course; if they are weak, undernourished and mentally underdeveloped the nation must look forward to decline and, perhaps, to decay.

Realizing fully the seriousness of the situation, the government is now devoting a tremendous deal of attention to the work of saving the babies of the United States. Through the Children's Bureau of the Department of Labor and the Woman's Committee of the Council of National Defense, it is effecting a great organization for this purpose.

It has already enlisted more than 11,000,000 women and provided more than 12,790 local units. In many instances the jurisdiction of these units has been narrowed down to twenty-five families and when the organization is complete each mother in America will be assured of expert instruction in the care of her children.

Of necessity, a large part of the child welfare campaign will be directed toward the large industrial centers of the country, where, owing to deplorable housing conditions, lack of proper recreation areas and other causes, infant mortality figures show signs of taking an alarming increase. An illustration of this is given in a recent report by Miss Estelle B. Hunter to the Children's Bureau of an investigation into conditions prevalent in Waterbury, Connecticut. Waterbury is typical of the eastern city caught unawares by the overnight

development of gigantic war industries and by the multitude of problems arising therefrom.

In many respects conditions in Waterbury were found very bad and in urgent need of alleviation, being mostly those due to poverty and ignorance.

The importance of sanitation to any sort of health program is well known, but, its relation to the health of infants is much greater than to the health of older children and adults. Baby saving involves much more than the mere prevention of death, if the babies are to be developed into intelligent and capable citizens.

City laws should provide that all urban dwellings be equipped with such sanitary necessities as running water, indoor bathtubs and sewer connections. It is likewise the duty of cities to provide for the education of tenants in matters of hygiene, inasmuch as the wisest of laws can be rendered ineffective by ignorance or lack of interest on the part of those for whose benefit they are designed.

England, France and Germany have at last awakened to the woeful mistake of neglecting this problem, and are trying frantically to retrieve it. It is the manifest duty of the United States to lend every effort toward the reduction of the infant mortality rate in this country.

IMPROVING THE HEALTH OF CHILDREN

The Playground and Recreation Association of America, No. 1 Madison Avenue, New York City, has undertaken a nationwide drive, with a view to securing an army of boys and girls who will serve their country by becoming physically fit. The argument is that it is the patriotic duty and should be the goal of every boy and girl to measure up to the standards of national health and strength.

Various tests have been devised both for boys and girls, which must be passed for proving normal health and fitness, and those children who can pass these tests, it is proposed, are to be granted the right to wear a bronze medal to be supplied by the Playground and Recreation Association of America. These tests were adopted as long ago as 1913 and are as follows:

A Boy, to win the first medal, must (1) pull up or chin himself four times; (2) jump 5 feet 9 inches in a standing broad

jump; (3) run 60 yards in 8 and 3-5 seconds.

A Girl, to win the first medal, must (1) run a potato-race in 42 seconds, or an all-up Indian-club race in 30 seconds (simple descriptions furnished on request); (2) throw a basket-ball into its goal twice out of six trials, from 15 feet away; (3) walk 24 feet, balancing herself, with a book on her head, on the narrow edge of a fixed 2×4 scantling. (For the second and third medals, these tests are made more difficult.)

The association in question is cooperating with the Children's Bureau and the Women's Committee of the Council of National Defense, in the patriotic recreation-drive of children's year. Detailed information may be obtained by writing to the Association at No. 1 Madison Avenue, New York, N. Y.

Don't wait to be urged to join the W. S. S. Army.
What if our men in the trenches waited to be urged?

THE INTRAVENOUS USE OF CHLORAZENE

There have been received by us many inquiries from physicians who want to know whether chlorazene can be administered intravenously with safety, and whether, when so given, it is valuable in the treatment of infectious diseases. Thus far we have declined to commit ourselves in print, because we appreciate the danger of the promiscuous injection into the bloodstream of a remedy of this class without preliminary physiological investigation and careful clinical trial by men trained in this work. However, there can be no harm in stating that we know that chlorazene has been used intravenously by a number of responsible clinicians, and with quite satisfactory results in some instances. The conditions in which it has mainly been employed have been cases of septicemia of various kinds and one of anthrax—the latter mentioned in the literature, and to be referred to further down.

In order to form an intelligent estimate of the toxicity of chlorazene when used intravenously, the following experiments were made by Mr. Carl Nielsen, of Chicago.

A 12-pound female dog was given an injection of approximately 0.03 Gram of chlorazene in physiologic salt solution

every hour, until eight injections had been administered. This solution contained 1 percent of chlorazene. The total dose administered was about 0.23 Gram (3 1-3 grains) for every 10 pounds of body-weight. The dog exhibited no visible symptoms, with the exception of a slight drowsiness following each injection. At 5 p. m., after the dog had received eight injections of chlorazene, as described, it was fed, and the appetite apparently was normal. The next morning, the dog was found to be in a perfectly normal condition.

Each dose given this dog was equal to one 6-grain dose to a human being weighing 150 pounds, or a total dosage, in eight hours, of 48 grains for a person of this weight.

No pain was caused by the injection, provided care was taken that none of the solution escaped into the tissues at the site of injection. Even a small amount of the solution, though, which by accident was injected around the vein instead of within it, caused considerable pain and swelling.

In this connection, we have read with interest an article upon the intravenous injection of eusol in chronic arthritis, contributed by Harold Fairclough to the June 15 number of *The British Medical Journal*. Eusol is a hypochlorite solution widely used in England, and, as employed by Doctor Fairclough, contained 0.5 percent of free hypochlorous acid. The dose used was 100 mls. The frequency with which injections were made is not stated.

Doctor Fairclough says that he has given these injections in 14 cases of chronic arthritis, some of them distinctly of the deformans kind. In 4 of these, there was marked improvement, in 2 no benefit, and in the remainder the evidence is inconclusive. Altogether 6 cases are described in detail. All of these were of long standing, ranging from six months to five years. In all, there was joint pain and swelling, and in most of them considerable deformity. In most of these, the improvement following after even one injection of the hypochlorite solution was immediate and definite and quite clearly owing to the treatment employed.

In the March 9 number of *The Journal of the American Medical Association*, Graham and Detweiler have given a report of a typical case of anthrax, with re-

covery, following the use of chlorazene solution. On November 24, 1917, the day after admission, there was a temperature of 103.7 degrees and a pulse of 140, per minute, and the respirations were very labored, owing to the increase of mucus in the larynx. A wide local incision was performed under general anesthesia. The following day, the pulse ranged between 132 and 146, and the temperature from 102.3° to 104° F. Now 20 mls of anti-anthrax-serum was administered. However, on the succeeding day, the pulse and temperature remained about the same, while the respirations were more labored. The patient was extremely nervous and restless and could not sleep. No improvement was visible the following day. An extensive edema appeared in the patient's neck and chest, extending to the upper part of the left arm, the whole area looking very red and acutely inflamed. A blood culture revealed the presence of anthrax-bacilli in the circulation.

At this time, the patient was given 100 mls of a solution of chlorazene, along with 80 mls of antianthrax-serum. A half hour later the patient had a severe chill. Four hours later, he was sleeping, the pulse had dropped to 114 and the temperature to 101°F. At midnight, the pulse was 100 and the temperature at 99.4 degrees. Thereafter, improvement was rapid. The following day the temperature fell to normal.

There can be no doubt that chlorazene is less likely to produce injury when administered intravenously than the hypochlorite solutions. In a paper contributed by Malloy to *The Biochemical Journal*, the author showed that hemolysis is less likely to occur following the experimental injection of chlorazene solution into the bloodstream (of animals) than with the various hypochlorite solutions.

The evidence clearly demonstrates that chlorazene has possibilities in the treatment of diseases by the intravenous route. Used in moderate dosage, the present writer believes it to be safe, providing reasonable care is taken in its administration. There are many bacteremias and septicemias, both acute and chronic, in which its trial certainly is warranted with the expectation of good results.

The report of the case of anthrax given above certainly is sufficient to encourage

many physicians to give this important germicide a careful trial.

He also serves who stays and saves.

WHEN CAFFEINE, WHEN CAMPHOR?

Caffeine and camphor are two of our most important stimulants and heart tonics. Both frequently are administered subcutaneously in the treatment of shock and cardiac asthenia occurring during pneumonia, influenza, and other diseases. Both are of great value, but, their indications are somewhat different.

Caffeine is a powerful heart tonic and diuretic; it also is a very active cerebral excitant. You know how often a cup of coffee will keep you awake. Therefore, it seems clearly indicated in conditions in which there are associated heart weakness and cerebral torpor. Take, for instance, a case of senile pneumonia, in which the patient is feeble, with pulse rapid and weak, he is inclined to sleep, is mentally sluggish, and perhaps semicomatose. Here, there is a clear indication for caffeine. It is used as an antidote for opium poisoning.

To secure quick results, it is best given hypodermically, as caffeine and sodium benzoate, this being at the same time a powerful heart stimulant and urinary eliminant. Its diuretic action gives it special value in cardiac dropsy and nephritis.

Camphor, on the other hand, while less decided than caffeine in its action as a heart tonic, is none the less valuable in the treatment of certain types of heart weakness; but, instead of being a cerebral excitant, it is a nerve sedative, and, therefore, is of special service in cases where it is desirable to brace up the circulation and at the same time relieve associated excitement. The delirious patient, the patient who is tossing from side to side, rolling about in his bed, is constantly on the move and can not sleep, frequently will respond nicely to camphor. In the sthenic types of pneumonia, with considerable excitement, it is by some considered almost specific. In nervous exhaustion, hysteria, sunstroke—any condition requiring cardiac support, with nerve sedation—it usually is indicated. Such patients should not be given caffeine.

We believe, if our readers will keep in mind the difference of these two remedies

between their action upon the cerebral centers, they will find many indications for their successful use.

National War Savings Day was only one day; our men in the Army and Navy have their day every day.

THE EXCISE TAX ON MEDICINES

A matter of the utmost importance to physicians is the proposed increase of the federal excise tax on so-called "proprietary medicines" from 2 percent (the present tax) to 10 percent. According to the newspapers, this increase has been agreed upon by the Ways and Means Committee. If it were to be placed only upon what the physician understands as "proprietary" medicines, and what the layman calls "patent" medicines, none of us would object, since, when the law was originally passed, it was undoubtedly the intention of our lawmakers to restrict the burden to preparations of this kind. Unfortunately, the law was so loosely drawn that it is capable of almost any interpretation, and, as the Government needed the money to carry on the war, application has been made as sweeping as possible.

As the law is being administered at the present time, a very large majority of the medicinal preparations used by the medical profession come within its scope, the only clearly defined exceptions being remedies that are included in the U. S. Pharmacopeia and National Formulary. All preparations that are made under United States patents, that are protected by trademark, that are recommended as cures or remedies for diseases or disease conditions, that have disease-name designations, or to which is definitely attached the name of the deviser or the producer, are subject to taxation. The same product may be free from taxation when made by one house, and subject to taxation when made by another house, if the one has trademarked the name of the product and the other has not. Many inequalities of this kind might be mentioned.

If the tax is increased to 10 percent without modification of the law, we believe that probably 75 percent of the medicines used by doctors will be affected. Since in the last analysis the sick man pays the tax, the burden will fall upon him. Nearly all definite synthetic remedies introduced within recent years will be taxed, including such substances, now made in

America, as adrenalin, novocaine (procaine), salvarsan (arsphenamine), veronal (barbital), and dozens of others. Many other chemicals that are sold under trademarked names, like atophan, chlorazene, and the like, will be taxed heavily. The Compound Cathartic Pill will be free from taxation because it is official, but, the nonofficial anticonstipation pills of all kinds will be subject to taxation. Dover's Powder will be free from taxation because it is official, but Hinkle's Cascara Pill will be subject to taxation because the word "Hinkle" has become part of its name. To give any information on the label concerning the employment of any product, even though information of this kind is vitally necessary for correct application of the drug, will make it subject to taxation.

Physicians who object to paying more for their medicines, and who believe that no additional burden should be placed upon themselves and their patients, should express their feeling in this matter to their congressmen and senators. Medicine is a necessity for the sick. While it may be wise that it should bear part of the war burden, this burden should be light. Let the heavy taxation be restricted to luxuries and non-essentials such as the so-called "patents," the cosmetics, and things of this kind.

If you are interested, as of course you are, speak now, or, be prepared to take *your* medicine, expressed in increased cost of the necessities of your practice.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION

As is customary, the American Medical Editors' Association held its annual meeting in the same city and at the same time that the American Medical Association convened, namely, last June, in Chicago.

Like all other medical associations, this one showed the influence of the war, in that many of the members were unable to attend because of their being in active army service. Nevertheless, the association has done some active work, notably in connection with the vicious zone system of second-class rates that went into effect July 1. Especially the secretary and treasurer, Dr. J. E. MacDonald, Jr., and Doctor Lewis have been instrumental in placing the needs of the medical members before the Senate Committee. Propaganda has

been carried on by the secretary of this association as well as by all medical journals—in conformity with an earlier resolution—in the offices of both the surgeons-general, in securing additional applicants for the Medical Reserve Corps.

In connection with this propaganda, the association unanimously resolved to pledge renewed efforts to the Surgeons-General of the United States Army and Navy, and to the Council of National Defense, placing at the disposal of these the pages of medical journals for unlimited editorial space, with the purpose of bringing before the medical profession the needs of these important departments. Various other resolutions were adopted, tending to promote the most important work in which the American nation at present is engaged, namely, the winning of the war.

Join the army behind the Army—be a war saver.

HOW AMERICAN SOLDIERS SUBMITTED TO TRENCH-FEVER EXPERIMENTS

Trench-fever is a disease that has been common on the western front. It may have existed before, but, has not been either frequent or severe enough to attract the attention of the medical profession. Now it represents one of the greatest causes of disability in the allied armies. Nothing definite was known about either the cause or mode of spread of this disease.

The following account of certain experiments undertaken in France for the study of this disease, is excerpted from the *Official Bulletin* for June 18.

A cablegram from the commanding general of the American Expeditionary Forces to the Secretary of War reports the success of a trench-fever investigation, which was made possible through the willingness of 66 American soldiers to risk their lives. The message contains the names and home addresses of the 66 men who submitted to inoculation, all of whom now are either cured or convalescent.

Selected From Volunteers.—These men were from field hospitals and ambulance organizations, units commonly designated as noncombatant. They were selected from a large group of volunteers, as the healthiest and, consequently, the best able to withstand a long siege of trench-fever, which has been one of the most baffling diseases en-

countered by the allied armies. The men selected were sent to a hospital behind the British front line in January.

Serious But Probably Not Fatal.—While it probably never is fatal in itself, it may, through frequent relapses and debilitating effects, render a certain proportion of men permanently unfit for military service, the approximate average time thus lost being six months. In consequence, despite the fact that trench-fever is not a fatal disease, it has proved a serious one, from a military point of view.

The problem of protecting our men, if possible, from this added suffering, was one of the first questions faced by our American Expeditionary Forces. Before any intelligent protective measure could be taken, however, two points had to be established: First, is this disease caused by germs? Second, if a germ-disease, how is it spread?

Tests on Animals Fail.—Attempts were made to establish these points, by using animals, but, no animals susceptible to this disease could be found; so, as in the case of Walter Reed in his work on yellow-fever, it became necessary to resort to volunteers from our Army, a few men willing to sacrifice themselves so that the many might be saved.

The first question studied was, whether this was a germ-disease. No germs could be seen with the microscope, but, the medical department knew that there are numerous germs that can not be seen by even the most powerful magnification. Therefore, this point had to be established by taking blood from men having the disease and injecting it into healthy persons. Out of 34 of volunteers inoculated with blood, or some constituent thereof, taken from 7 victims of trench-fever, 23 contracted the disease. Out of 16 other men inoculated with the blood from a trench-fever patient, 15 contracted the disease. These experiments proved that trench-fever is a germ-disease and that the germs thrive in the blood of men so infected.

Spread of the Disease.—The next question was as to how this disease spreads. Naturally, the body-louse was considered first. Large numbers of these parasites were collected from patients having trench-fever, while another lot were brought from England, these having been collected from healthy men. The lice from trench-fever pa-

tients were allowed to bite 22 men, and, of these, 12 later contracted the disease, while 4 men bitten by lice from the healthy men remained free from the disease. Further, 8 other volunteers living under exactly the same conditions and in the same wards, but, kept free from lice, did not contract trench-fever. After blood inoculation, the disease developed in from five to twenty days. After men were bitten by infected lice, it required from fifteen to thirty-five days for the fever to appear.

Clue to Intelligent Control.—With these facts in hand, namely, that trench-fever is a germ-disease and that it is transmitted by lice, it is now possible to take up the question of controlling, in an intelligent manner, the disease. As long as the protection of the men from lice was only a matter of comfort and of no military importance, the extermination of the parasites did not warrant extraordinary measures; now, though, since it is known that it is not simply a matter of discomfort, but that the "cootie" (trench-vermin) is, incidentally, one of the largest causes of disability, it is deemed worthy of extraordinary efforts to control these pests. It is a repetition of the question of mosquito control, yellow-fever having been eliminated along the Panama Canal by these means.

No Small Sacrifice by Men.—It is no mean thing that these volunteers did in France. To face illness of weeks, with extreme suffering, requires peculiar valor. The average loss of weight for these men was between 20 and 25 pounds. Incidentally, the hospital in which the experiments were carried out was shelled by the Germans in the early part of their March drive. It is believed by the Army Medical Corps that the sacrifice of this group of 66 men will, in time, lead to the protection of thousands of men from the ravages of trench-fever.

Give up your luxuries that the Kaiser may be made to give up his ambitions.

A CHICAGO SURGEON THE FIRST ONE TO SUGGEST THE CATER- PILLAR-ENGINE AND TANK FOR MILITARY USES

It may interest the readers of CLINICAL MEDICINE to learn that the use of the caterpillar-engine as a tractor and carriage for artillery was first suggested to the

manufacturer by Dr. G. Frank Lydston, of Chicago, two years or more prior to the beginning of the present European war.

The suggestion was made to Mr. Murray M. Baker, manager of the Peoria plant of the Holt Manufacturing Company, while Doctor Lydston was inspecting the first complete tractor on display at the Peoria plant. He not only called attention to the merits of the invention as a tractor and also as a carriage for artillery, but, he also sketched a rough design for what he termed a "land battleship" or "moving fort," to be manned by rapid-fire guns and small-caliber cannon. The doctor also suggested to Mr. Baker the advisability of submitting the device to the United States Government.

The attention of the press was called to the foregoing facts after the battle of the Marne, when descriptions of the caterpillar-engine and the "tanks" were being widely published. No attention was paid to the matter by the newspapers, probably because it is not fashionable to give to doctors credit for anything where this can be avoided. Mr. Baker still is manager of the Holt Manufacturing Company's plant at Peoria and doubtless would be glad at any time to verify the foregoing statements.

THE WOMAN'S NUMBER

This number of CLINICAL MEDICINE is devoted to the women of the United States and of our Allies, in appreciation of the splendid work they are doing. As much as possible, we have given the floor to the women themselves. Unfortunately, not all contributions that we had hoped to receive materialized. The reason is, doubtlessly, that our women are too busy doing things and have but little time to talk about it. However, we want you to know, you doctors' wives and all you other women, that we men appreciate what you are doing. With you to stand behind the men, both fighting, both carrying on, and all of us pulling together in the same direction, the war must be brought to a successful end, and to an end that will mean safety for individuals and for nations. Never before, we believe, have nations stood together so solidly for the accomplishment of a definite purpose; never before has the need been so great. Let us carry on!

Leading Articles

Work of the Nurses During the War

By MARTHA M. RUSSEL, R. N., New York City

The Sloane Maternity Hospital, New York City

EDITORIAL COMMENT:—The author of this interesting article has recently returned from France, where she had supervision of the entire American nursing forces during the past winter. Her communication, thus, is presented from first-hand knowledge.

WHEN the day came that we ceased to be spectators of the world-conflict, every citizen wished to make a contribution toward the victory for which we had pledged ourselves to fight. The young men turned eagerly toward the service that attracted them: The navy, where they could help destroy the menace of the submarine; the air-service, with its challenge of adventure in new regions; the artillery, with its mechanical and engineering problems. All these, as well as the other branches of service that go to make up a complicated modern army, called for volunteers during the first weeks. After the draft-law was passed, we realized that it was a real business upon which we had embarked, and the manhood of our country steadied itself to carry the burden.

The women were no less eager to do their share, and many of them found their definite responsibility ready for them in the work laid down by the man of the family as he went into the army; the war-industries called for many more. However, to none was a more important task presented than lay clearly before the graduate nurses of the country; namely: that of caring for the sick and wounded soldiers and nursing them back to health in every possible instance, and, when that might not be, to give tender care and gentle ministrations to those lying in the shadow of death.

After a year and a half, we can say that the nurses have come quietly and bravely forward to meet the need, thousands have taken their places as aids to the surgeons, and more thousands will be called for to carry on the work. The drive for nurses,

last June, has brought many new enrollments and a more serious consideration than ever of ways and means of caring for the sick in this country, so as to release the great numbers of nurses needed for our army and, yet, not neglect the requirements of our citizens.

There is now a drive for an increased number of young women to enter the training schools, either in the civil hospitals, which are increasing their facilities, or in the army schools of nursing, which are being organized in the cantonment hospitals, where the pupils will take care of the soldiers for about two-thirds of their course, studying the nursing of women and children in some civil hospital. The dean of this school is Miss A. W. Goodrich, who has been identified with nursing-education for years, and she has as her aids other nurses who have spent their lives teaching young women the art and science of nursing. Thus every effort is being made to meet the immediate need and to provide for the future, and the nurses have a right to ask that the public shall help them in every feasible way in fulfilling the task.

The American Red Cross Nurse in England and France

In 1909, the American Nurses' Association voted to affiliate with the American Red Cross, to organize a nursing service; and, in 1911, a proclamation by the President of the United States recognized the American Red Cross as the only volunteer agency permitted to render aid to the land and naval forces in time of war. So, now, the nursing service of the American Red

Cross constitutes "reserves" for the Army Nurse Corps; and so wisely had Miss Delano, the director of the service, planned during the years of quiet, that the appeals of the Surgeon-General have been answered by calling out over ten thousand nurses for active service here and in France, England and Italy; and in her busy office in Washington Miss Delano is planning to

lot has fallen there have learned many things from this well-organized body and its associated Canadian and Australian branches.

Many Americans have visited one of the great camps where our men learn the trade of war; but, unless their own particular soldier was a patient in the hospital, it is very likely that they did not pay much attention to this part of the preparation for the army—the varied activities of the camp call for too much attention—but, if this particular soldier was ill, he was very interested in the great barracks, with their connecting corridors, where everything necessary for a well-equipped hospital has been assembled and where specialists are studying and treating diseases and giving our men every possible chance to get well.

The "nurses' quarters" are planned to give a bedroom to each nurse and pleasant assembly-rooms for their time off duty. The hours of duty are about eight, and the nurses that come from civilian work find much to learn of military procedure and



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General Pershing Greets Our Nurses in France

have the ranks kept full of skillful intelligent women as long as the need lasts.

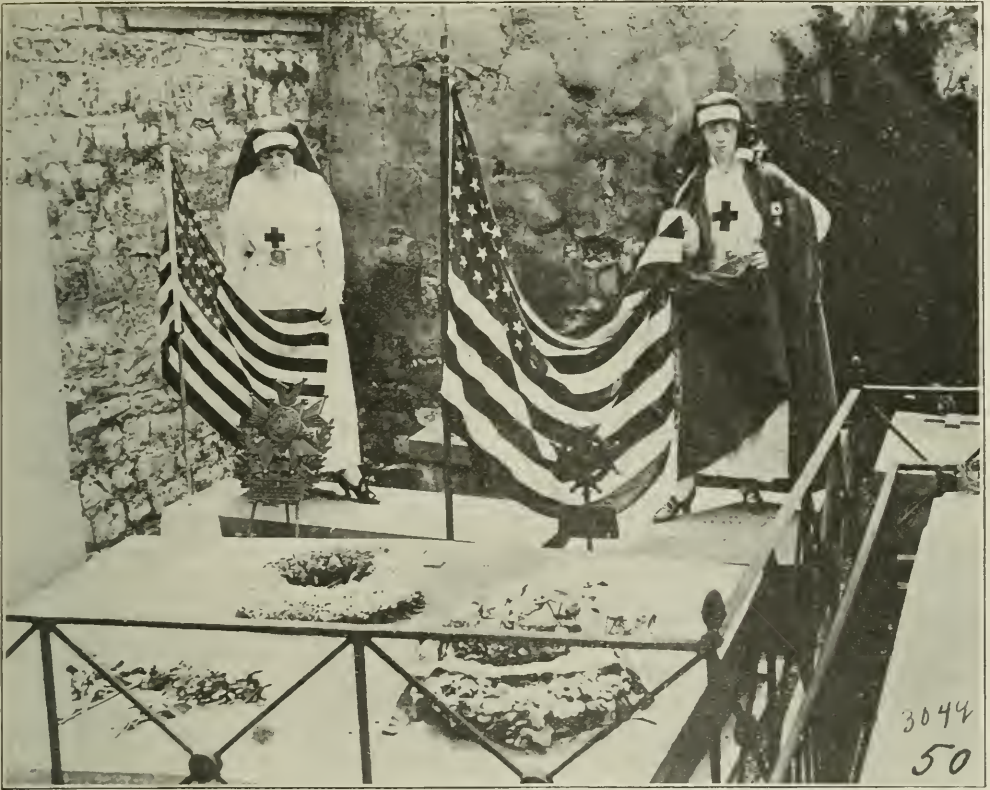
It is well for us to remember that the first American forces to land in France were the doctors and nurses of the Lakeside Unit, and they soon were followed by others. These first units took over the care of the patients in some British hospitals, where they devoted themselves to the "Tommies" and adapted themselves more or less to the rules of Queen Alexandra's Imperial Military Nursing Service, which organization of British nurses has followed the army all over the world, and its members have learned to be "patient, wise, and mirthful" as they stood by the men of the Empire in many fields. The principal matriarch of this organization in France has been most appreciative of the work of our nurses in northern France, and those whose



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"Lotte von Edelweiss," One of the Wonderful Red Cross Dogs Trained by Mrs. Leo F. Wanner at the Lewanno Kennels, Hempstead, L. I.

army records. Though our camps here do not have many new types of cases, the interest of the wards and the need to cheer the boys that have just come from home and find themselves sick makes some very real nursing, and, so, the nurses find here a chance to help win the war. However, as it is with the men, on the day when "orders" come for going overseas, the members of the corps that are detailed to go are envied by their sisters left behind.

The sea-voyage on a crowded steamer, with its possibility of submarine experi-



Doing Honor to American Soldiers Who Fell in Battle.

ences, never seems to daunt these young women, and they go forward eagerly to take up the new tasks, and they are all as hopeful as may be of going to the "front" as soon as they land. Of course, it is likely that they may go some time, but, it is probable that they will find that a comfortable place some distance in the rear gives a good chance for a wounded man to convalesce.

The Military Hospitals in France

Great hospitals have been planned and built in France during the months we have been at war, and many of the nurses that are now arriving say that their own quarters are "quite too comfortable for war-time"; however, when the cold, damp days of a French winter come, the long nights in the insufficiently heated wards will probably bring enough chilblains on toes—perhaps, even, on fingers and noses—to convince the victims that they have some physical hardships to meet and bear.

These hospitals usually take some French building as a unit—it may be a hotel, a school or a hospital—and then they build

about it the one-story huts such as we are familiar with in this country. These base hospitals are developing specialties as the demand is foreseen; an orthopedic center at a conveniently situated hospital in the central part of France; a psychiatric hospital, far enough away to be out of sound and sight of actual warfare; and in these special hospitals the carefully recruited units that have had the requisite training are using the skill which they have gained in previous years, for the help and healing of the men who come back from the struggle, injured and broken. The hospital-trains bring convoys of hundreds of men at a time, and the system with which the ambulances bring their loads, the orderlies place them in the reception-hut, the doctors make the preliminary examinations, and the men are assigned to the ward where they are to be cared for, is a revelation to the nurses that have worked in civil hospitals where the patients arrive one by one. They soon find that each individual soldier-boy has his own personality; and the devotion to a certain patient that has

needed constant attention—say, a case of bad burn—by one or two nurses that have made his recovery their special interest, brings satisfaction to many a suffering patient and many a devoted nurse.

From these base hospitals, surgical teams—consisting of a chief surgeon, his assistants, and two or three nurses—go out for a period of service in the field hospitals near the actual fighting. They receive here the patients from the dressing stations who have had the most essential things done for them and then been brought back over the shell-torn roads, and arrive worn and weary, dirty and disheveled, in need of care of the most active kind for a brief time, surgical and hygienic—then, how the men do sleep! It is an excruciatingly painful injury that will keep these poor fellows awake for any great part of the first twenty-four hours in a good clean hospital-bed. The mental and physical weariness of weeks in the trenches, the shock of the injury call for rest for mind and nerve and muscle, and the healthy young bodies respond by yielding themselves to overpowering sleep under conditions that seem almost to forbid dozing—the coming and going of the nurses and doctors, and often they are suffering from injuries that are likely to cause much pain before recovery.

It is a part of the ingenuity required of the medical department to find the best available sites and buildings for these hospitals; it may be that a beautiful old chateau is in a very satisfactory location; its vaulted wine-cellar may furnish an ideal "abri" for the air-raids; or, perhaps, a hut or two, and bell-tents for the living-quarters of the staff, is the shelter provided. Occasionally, in places where the air-raids are very frequent, the patients and nurses live in dug-outs.

The Americans have organized several "mobile units", with an entire hospital equipment, from frying-pans to sterilizers, that can be packed and transported in good order at very short notice. The wards and quarters for the staff are canvas houses, the operating-rooms and x-ray-rooms, which need to be free from vibration, are portable houses, such as have furnished many an American with a comfortable vacation-home in past summers, but, now are adapted for a serious use. And it is a matter of life and death that each piece of equipment fits into its proper groove. The kitchen and

laundry are mounted on trucks, and can fulfil their part of the duty of caring for the sick wherever fuel can be obtained. These are really very comfortable outfits for ordinary weather and probably will stand wind and rain with comparatively little damage. Of course, every nurse attached to such a unit hopes to see its trucks and ambulances follow the army to the gates of Berlin.

The Devotion of the Red Cross Nurse

During this campaign, when our men have been brigaded with the British and French, there has been a call for our nurses to help with their care in the hospitals of the Allies. In the British hospitals, the man can talk with the British "sisters", and, while we will not repeat what they say when they get tea for breakfast, they are highly contented. In the French hospitals where the doctors and nurses speak only the language of the country, the Yankee boy assigned there is a rather lonesome lad, unless he finds an American nurse there ready to attend to his needs. The nurses have been more than ready to volunteer for this service and to face any sort of living-conditions, if only by so doing they could accomplish the task they came to fulfil—take care of our boys.

In this service, it is especially important for a nurse to be able to speak French; for, her efficiency is much hindered if she cannot understand the doctor's orders as he gives them. Consequently, all the classes and conversations in French that she can avail herself of before leaving America will tend to help her in her actual work. Much of her work will be with English-speaking patients and staff-members, but, wherever she is, a knowledge of French will add to her comfort and pleasure in her hours off duty.

Since our men are so far from home, it has been necessary to plan for more extensive convalescent camps than are needed by the English, who can go to "Blighty" for a week or two. So, the hotels by the sea and in the mountains have been adapted for the use of the convalescent soldiers, and in many of them there are nurses to watch over these patients.

In order that any of our men showing signs of tuberculosis may immediately enjoy the best conditions for recovery, sanatoria have been opened in the beautiful country in the foothills of the Pyrenees,

and here the nurses have opportunity to give care and encouragement to those who are sick and far from home.

Nursing Civilian War Victims

The care of the fighting men is almost as direct a contribution to the strength of the Allied armies as it would be to carry a gun; but, there is other nursing being done in France that seems a less direct aid to winning the war, yet, the results have been very useful. The burden of war rests, not only on the man that goes to the front, but, also, on his family, and in the lonely homes in our own country we realize much of the sacrifice demanded of the women and children. However, in the invaded districts and near the lines in France, in Belgium and Italy, where war has demanded the very substance of the daily life—the house and the land and the usual work—the weary, sad faces of the little children tell a history of horror such as we know not. If we are to do our full share, we must help carry this burden that lies so heavily upon the weak.

The American Red Cross and its affiliated societies have been making every effort to carry out the expression of kindness and helpfulness of our people, and, since skilled hands and trained minds are needed for this work, the nurses have been called upon to help here.

Conservation of Child-Life

You doubtless have read of the hospital at Evian, where the little sick children of the "repatriées" receive care that helps them to get well and which prevents the spread of contagion throughout France. The French folk in a village in the devastated districts make every attempt to care for the orphan children; in one village, our workers met a woman of eighty who had had fourteen children, had brought up thirty, and was then caring for five little waifs. But, the village doctors are gone to the front and the hygienic conditions are poor, and, so, dispensaries have been organized, and the district nurses go out into the homes, and the little children follow them lovingly. If a man hears from his home that this little motherless daughter is sick and there is no one to care for her, he is not as good a fighting man as when word comes that his little darling was ill, but that the American doctor took care of her in the hospital and she now is home again and the nurse is coming every day to at-

tend to her needs. This has happened again and again, both in France and Italy, and the gratitude is very real and very true.

The world-campaign for better babies, in order that the rising generation may be able to enter into the heritage their fathers and brothers are dying to win for them, has been well started in France. Baby welfare exhibits have been held in Lyons, Marseilles, and several other cities and the cooperation of the French doctors and philanthropic workers has been enlisted, and you will find the American nurses following up their cases as earnestly in these cities as they are in Chicago or New York. Young Frenchwomen are working with them, and there is every hope that their work will prove as valuable as similar work has done here.

The institutions, where the orphan children or those whose mothers have to stay and work in districts where the bombing by shells or gas-bombs is so frequent that it is unsafe and unwise to keep the children there, are also places where the American nurse has an opportunity to teach and to help the children that have seen and known the worst and most brutal of experiences and need mental and physical care to bring them back to normal living.

The world is very sick and, however much skill and strength a nurse may have to offer, it seems only a cup of cold water for the fevered thirst of nations. So, the young woman that goes out needs to have a stock of patience and courage and wit and wisdom for daily use; she needs to feel that her countrymen are behind her, to give her the best-possible chance to make her work effective; and, also, that her friends think of her, not as one to be pitied because she is in uncomfortable situations, but, as one who has undertaken to fulfil her responsibility to her country by giving back to the world the skill given her in her training in our schools.

The Need for More Nurses.

The call now is for more nurses for the soldiers and more nurses for the civilian work here and abroad. How can it be met? It can be done only by utilizing every bit of nursing-power we have, by using "hourly nursing" in as many cases as may be; by having as many married nurses as possible take up some form of nursing-work. In the institutions and organizations for public-health work, every clerical and mechanical aid must be given the nurses; large numbers

of young women must enter the schools, to be ready to accept and carry the responsibilities of the coming years. For, no one need doubt that years of reconstruction will call for many a woman of steady brain, skilled hand, and warm heart, who can stand by the bedside of a sick child and quiet and comfort it, and who can understand so well the problems and causes of the child's illness that she can cooperate with sanitarians and engineers and philanthropists in removing the unhygienic conditions.

The reeducation of our soldiers that are injured will need to begin in the hospitals,

and the nurses will find much of inspiration in helping the men to use the opportunities for new endeavor that the reeducation-program offers. The mental reconstruction needed by these men should be started as soon as they begin to be interested in life with their returning strength; and here the intelligent sympathy of the nurses will be worth much.

There never has been a time when the potential value of a nurses' training was larger, and to every young woman who has it or who can get it opportunities of helpfulness lie open.

Work of the Social-Hygiene Committee of the Woman's Committee, Council of National Defense

By RACHELLE S. YARROS, M. D., Chicago, Illinois

EDITORIAL COMMENT:—The work of the Social-Hygiene Committee outlined in this article, written by its chairman, promises much good, not only in its immediate effects, but, even more so in its remote consequences.

IN order to give a correct report of the work of the Social-Hygiene Committee, it is necessary to present a brief history of a social-hygiene committee that has been in existence since 1906.

At the International Congress held in Brussels in 1902, which met to study and discuss the diseases associated with the social evil, it was decided that the old methods of suppression, segregation, and examination were entirely inadequate for coping with the venereal-disease problem, and it was perceived that a broader program would have to be adopted and that the question of prostitution would have to be dealt with, not only from the medical angle, but, also, from the sociological and moral point of view. The congress recommended the organization of social-hygiene societies in every country, for the purpose of studying the various aspects of the social evil and the methods of dealing with it. The late Doctor Prince Morrow was a delegate to the congress, and, on his return to New York, he organized the first Social-Hygiene Society in New York. A similar society was soon organized in Chicago, being composed of leading men and women, professional and lay. It was then that the group

of women from the Chicago Woman's Club, one of the strongest organizations of its kind in the country, met to discuss the question, "What can the Chicago Woman's Club do for the social-hygiene movement?"

Beginning of the Educational Campaign

In 1906, at a public meeting held at the Chicago Woman's Club, where some of our leading medical people spoke on the subject of venereal disease (to be sure, in a very embarrassed and fumbling way, because we were not in the habit of discussing such matters before lay audiences, especially women), the interest was so great and the audience so impressed with the seriousness of the situation that it was decided, then and there, to form a social-hygiene committee, to be made up of some of the leading women physicians and lay women, members of that club. Soon a number of outside women of prominence were added to that committee. The purpose was, to start an educational campaign in social hygiene, beginning among club-women.

It is interesting to recall with what fear and reluctance some of the clubs consented to have us present the subject before their organizations. However, it is equally inter-

esting to record that, in most instances, as soon as the women got over their natural impediment of squeamishness, they listened with interest to the ugly facts of the dangers and causes of venereal diseases, because they realized that the health and happiness of the innocent women and children were at stake and that it was time that such facts should be faced openly.

In 1911, when Chicago's "Vice Report" appeared, we learned many things concerning vice and prostitution, the underlying causes thereof, and how best to deal with them. This knowledge made it possible for our social-hygiene committee to push the campaign more vigorously.

We soon realized that there was a great need for some sensible form of sex-education among our young people, if we were ever to bring about a healthier attitude in the sex-relation in the coming generation. We started short courses for teachers, nurses, and mothers in the Chicago Woman's Club, where we discussed such subjects as the adolescent period of the boy and girl, the importance of the awakening of sex-instinct, and what a girl's duty is in matters of sex. We also published one of the first pamphlets, "A Warning to Girls."

The work of this committee was, no doubt, in some degree responsible for the creation of a social-hygiene committee in the General Federation of Women's Clubs in 1910, particularly through the influence of Mrs. Charles Henrotin, who was the chairman of our committee for many years, and who was a member of the Chicago Vice Committee and one of the leading spirits in the Federation of Women's Clubs.

I am recording this, because it was certainly a great event in the social-hygiene movement in this country when the General Federation, with then a membership of nearly two million women, presided over by such a fine, conservative woman as Mrs. Philip D. Moore, of St. Louis, was willing to undertake and back an educational campaign of social hygiene among the women of this country. It was my privilege to be appointed the first chairman of that committee. In that capacity, I traveled through many of the states—east, west, north, and south—presenting this subject for the first time before various state federations and many leading clubs; and here again my experience was similar to that which we had in Chicago; that is, at first the women

would show fear of the subject and natural reluctance; then, gradually, they would forget the disagreeable phases and manifest earnestness and a desire to understand the subject thoroughly, in order to be able to solve the problems involved in educating their respective communities, as well as to deal effectively with the question of prostitution.

Introducing the Subject in the Chicago Schools

This Chicago committee of women was responsible to a great extent for the introduction of talks on social hygiene to the mothers and fathers of our school-pupils, which work began in 1911 and was carried on for three years, with great success. The mothers showed particular interest, and in many cases mothers came to us after the talks and begged us to tell their boys and girls things that they ought to know, stating frankly that they themselves were not qualified to impart this instruction.

We were to some extent responsible for the introduction of the teaching of social hygiene in the Chicago high schools in 1914. Those of us who took part in that teaching never doubted the value of this work. From the response that was received from many of the girls, one could plainly judge how eager most of them were to learn scientifically the truth about themselves, their physical makeup, their instincts, and why certain conduct is expected from women. Many who at that time doubted have come to believe in the value of the work, and I am glad to say that at a recent meeting of many of the high-school principals testimony was almost unanimous as to the advisability and value of such teaching in high schools.

Three years ago, the Woman's City Club, one of the most active clubs for civic improvement in Chicago, appointed a social-hygiene committee. Soon after, it was decided, for the sake of greater efficiency, that the two committees should unite and form a joint committee of social hygiene. With the backing of two such strong clubs and additional funds that the Woman's City Club obtained from one of its members, we were able to buy the film "How Life Begins", and thus to increase the scope of our work. During the last two years, our efforts have been devoted to the education of the younger women and girls.

When our country entered the war and the Woman's Committee of the Council of

National Defense was established, this joint committee of the Chicago Woman's Club and the Woman's City Club became the Social-Hygiene Committee of the Woman's Committee of the Council of National Defense. To that original committee, were added a number of women representing all big organizations interested in social-hygiene work for women and girls, the idea being to follow the plan of all the other committees of the Council, which was, to coordinate, cooperate and stimulate all the agencies doing the same kind of work.

The Social Hygiene Committee realized fully its great responsibility and wonderful opportunity to do intensive work, particularly because of the attitude that our government took on the subject of vice and the treatment of venereal disease.

Supporting the Government Program

Our government, by reason of the experience of the other warring nations, knew that "gonorrhea and syphilis have swept the contending armies like a plague, that they have done more damage to military effectiveness than the engines of death; that, literally, hundreds of thousands of soldiers have been kept from the firing-line by these evils." From our own country's experience at the Mexican border, we knew the great dangers of prostitution in war-time. We knew, therefore, that something fundamental, in the shape of a definite program, would have to be formulated to protect our army and navy from such disastrous results.

We are proud of the government program, because it is broad, scientific, and does not hesitate to take the stand boldly on the question of continence in man. It is the first time in the history of the world that a government has formulated such a program for its soldiers and sailors, taking the position that sexual continence is consistent with health and the best preventive for venereal disease.

Knowing that most of our boys were ignorant of the dangers of venereal disease and prostitution, the government undertook to inform them thoroughly by lectures, pamphlets, and moving pictures. It further decreed that no intoxicating liquors should be sold to soldiers and sailors. It prohibited the establishment of houses of prostitution in the camps or in their vicinity. It decreed that all cantonment-cities must abolish the segregated districts. It further

demanding that soldiers and sailors should report to the Medical Officer whenever they were exposed to disease through illicit relations with prostitutes, and receive prophylactic treatment. If they fail to report and contract venereal disease, they are severely punished.

The Government was aware and expressed in its program that man cannot live by work alone, that proper recreation plays a very important part in the life and conduct of man; consequently, through various agencies, the soldiers and sailors were to be provided with all forms of wholesome sports, and be supplied with magazines, newspapers, writing-materials, plays, music, and community-singing.

The Social-Hygiene Committee of the Council of National Defense perceived that, if the high standard of morals expected of the boys in the army and navy was to be maintained and venereal disease permanently checked, we must follow the government program in civilian life; that ignorance as to the dangers of venereal disease and prostitution must be dispelled and that scientific information concerning the sex-instinct and its proper function must be widely disseminated, so that girls may be conscious of their responsibility and opportunity in helping to uphold and permanently establish the single standard of sex-morality. The committee has carried on an educational campaign, through its group of prominent women physicians, before women's clubs, churches, schools, colleges, and industrial institutions, and we have reached, in the last year, between forty and fifty thousand people.

Outline of Future Work

However, we feel that this is only a beginning. We have a comprehensive plan for an intensive campaign beginning in September, through conferences with many heads of industrial establishments employing large numbers of girls, and through the newly established Social-Hygiene Division in Washington. With their aid, we hope to reach most of the women and girls in the city of Chicago and, perhaps, in the entire state. We already have received many invitations to give lectures in some of the department-stores, packing-houses, the telephone company, and other industrial establishments.

Through our ward chairmen, numbering 34, we already have outlined a plan

of action. Each ward is to send a group of twenty people to a given center, for the purpose of receiving instructions as to the government program; and these will serve as advance-agents for the educational campaign in their respective wards.

This work in the wards will be done with the cooperation of the teachers in every school in the ward, each ward having promised to contribute a certain number of teachers to receive the instruction.

We are organizing social-hygiene groups in each of the 101 counties of the State. These will plan for the showing of the film "How Life Begins", and we are to send lecturers to them, to do intensive work.

A group of women physicians have been giving lectures, either one or a course of three, on the government program, pointing out what civilians can do to uphold it.

We have established, in connection with the Red League, a clinic for the diagnosis and treatment of venereal disease. We keenly feel the need of such clinics. We have secured a competent woman physician, who is paid by the Woman's Committee

of the Council of National Defense. Every patient will be treated both for syphilis and gonorrhea. We are cooperating with the Morals Court, and we hope to get a good proportion of the prostitutes that are picked up on the streets, and not only give them free and effective treatment, but, seek to direct them to other agencies that will guard them and guide them further. This committee also is working with all the agencies that are aiming to suppress prostitution and to protect girls.

Lastly, believing that, in order to give them the proper outlet for their energies and direct them into useful channels, proper recreation is absolutely necessary for the young people in our communities, this committee, in its earliest activities, established a separate division for the recreation of girls. Under that subcommittee, we started the organization of the Patriotic-Service Leagues. Soon the work became so heavy and the demands upon our time so great that the council decided to make the recreation department a separate department of the committee.

The Use of Dichloramine-T as an Antiseptic*

By LEWIS I. MILLER. B. A., M. D., Chicago, Illinois

IT is a surprising fact that the instability of antiseptics is so little realized by many workers. Current literature is full of reports of experiments in which bacteriologists have added reactive, unstable substances such as hypochlorous acid, and the like, to media containing living organisms, that caused the prompt disappearance of these organisms; but if the same medium was subsequently sown with other organisms there was a luxuriant secondary growth, and astonishment was expressed at the inefficiency of the substance employed as an antiseptic.

Earlier experiments have been carried out by Kronig, Paul, Madson, Nyman, and Miss Chick. Miss Chick observed the number of bacteria that survived, at varying intervals of time, the action of a constant

quantity of stable antiseptics, such as phenol, at a constant temperature, on a known number of organisms. By utilizing these results mathematically, she was able to calculate a velocity-coefficient for the disinfecting action of the substance. The main results of these experiments show that in all essential particulars the act of disinfection could be regarded as obeying the laws governing a simple chemical reaction, the disinfectant representing one agent, and the bacteria the other. This conception is of the greatest importance since the cardinal points of efficient disinfection, namely, adequate active mass or concentration of antiseptic, time of action, and perfect contact are thereby experimentally established.

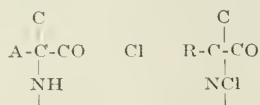
In the present war, which is distinguished by the frequency and intensity of virulent wound infections, no class of antiseptics has received such an extensive em-

*Read at a clinical meeting, June 10, 1918, at the West Side Hospital, Chicago, in connection with the meeting of the American Medical Association.

ployment as those of the chlorine group. Most of the antiseptics of this group are characterized by chemical instability in the presence of organic matter, and, therefore, conditions favorable for their use must include either provision for their frequent renewal or the use of some immiscible solvent for the antiseptic so that the active compound may be liberated gradually.

The Mode of Action

The action of this group of substances depends on the "active chlorine" in the compound, the ability of any particular substance to part with chlorine, free or combined, in such a way that it can effect the chlorination of bacterial and other proteins. This chlorination of bacterial protein seems to be incompatible with the life of the microorganism. It is necessary to refer in outline to the nature of this reaction. All proteins irrespective of their origin contain large numbers of amino-acid group, which may be represented as shown below.



These groups are capable of attack by substances containing active chlorine in such a way that the H attached to the N atom is replaced by the Cl. The compounds thus formed contain the NCl group, and hence belong to the class of chloramines. Their chlorine is still active, and they are themselves active germicides.

This formation of germicidally active chloramines is of importance in several respects. For example, the proteins and other nitrogenous compounds present in wound secretions may be converted into chlorine derivatives of antiseptic value by the action of a sufficient quantity of chlorine substance, and in that way the active chlorine antiseptic is generated in the wound from its own nitrogenous compound.

Chlorine-Antiseptics

The antiseptics of the chlorine group which are most commonly employed in the treatment of infected wounds are the following:

1.—Hypochlorous acid and its sodium- and other salts, including Dakin's solution.

2.—Chlorazene (Chloramine-T), the abbreviated name for sodiumtoluenesulphon-

chloramide, which is employed in an aqueous solution.

3.—Dichloramine-T, the abbreviated name for toluenesulphondichloramine, which is used only in an oily solution.

In most respects, the action of the various chlorine compounds is essentially similar, though each possesses certain properties which render it more or less suitable for particular purposes. As a matter of convenience, it may be desirable to give a short resumé of these considerations, the results of which are mostly taken from the experiences of Dakin, Carrel, Dunham, Lee, and others, as well as our experiences at the West Side Hospital.

1.—Hypochlorous acid and hypochlorites are best suited to cleansing septic wounds by irrigation. They markedly assist in the dissolution of necrosed tissue, they are unstable and very reactive, and must be renewed frequently in all parts of the wound, this being best accomplished by an intermittent method of instillation. But, the complexity of the apparatus necessary to obtain the ideal result, that is, by frequently renewing the antiseptic, makes this method quite cumbersome.

2.—Chlorazene (Chloramine-T), used in aqueous solution, is more stable, exerts more prolonged antiseptic action, and is considerably more effective than the hypochlorite when acting in the presence of blood. For details concerning the preparation of solutions of the hypochlorites and chlorazene, we refer to the publications of Dakin and Carrel.

3.—Dichloramine-T dissolved in a special oily solvent may be sprayed upon wound surfaces or poured into accessible parts of deep wounds. It yields moderate amounts of the antiseptic to watery media such as the secretion from wounds or mucous membranes, but yields much greater amounts when used on dry surfaces. It is suitable for cases requiring prolonged antiseptic treatment and for first dressings of recent wounds which do not require irrigation. It is also used for nasal and oral, and for ocular antiseptics, as reported by A. S. and L. S. Green of San Francisco in *The Journal of the American Medical Association* for April 27, 1918.

By reason of its availability in oily solution, dichloramine-T has a great advantage over the other chlorine antiseptics in that it may be used in high concentration, and

its action is of much longer duration. The application of the oil is extremely simple and it ordinarily need not be renewed more than once in twenty-four hours.

As to Dichloramine-T

Dichloramine-T is a light, yellowish-white crystalline substance, possessing a sweetish, rather pungent chlorous odor. It is stable in the solid state, especially when kept in colored bottles. Water dissolves only traces of it, though it is readily soluble in most organic solvents, yet it is difficult to find perfectly satisfactory solvents for it that will yield stable solutions.

In stable solutions, it has an intense germicidal action corresponding to its high content of active chlorine. A 2-percent solution will kill organisms in one-half minute, while 2-percent iodine does not kill them in 5 minutes. A 10-percent dichloramine-T solution will stop the motility of actively motile typhoid organisms in half a minute, and will cause them to agglutinate as they do in a positive Widal test. The solvent employed has been a mixture of eucalyptol and paraffin oil, both previously chlorinated to reduce their affinity for chlorine.

It is well, perhaps, to refer to the way in which dichloramine-T in oily solution acts. It is well recognized that the antiseptic incorporated with, or dissolved in, oily substances usually possesses little if any antiseptic activity because intimate contact with the infected matter is hindered by the oil.

When, however, oily solutions of dichloramine-T are brought in contact with the tissue, the partition-coefficient between the oil and the aqueous portion of the tissue is such that a certain amount of the dichloramine-T passes into the tissue and there exerts its germicidal action. The amount of dichloramine-T thus passing from the oil is enhanced by the presence in the aqueous medium of substances capable of taking up chlorine.

The oil-solution serves as a store for the antiseptic which is drawn upon to maintain the germicidal activity of the aqueous medium with which it is in contact.

Dichloramine-T is employed for surgical purposes in 5 to 20 percent solutions in chlorinated eucalyptol and paraffin oil. The constituents of the solution are all stable and may be preserved indefinitely, especially in colored bottles, but the solution itself is

sensitive to light and should be used only for a few days. A definite crystalline deposit as distinct from a faint opalescence is evidence of decomposition and such solution should not be used. Also, solutions with odor of rancid oil should not be used. Careful protection of the oil from light will do much to prevent decomposition. In preparing the solution it is necessary to dissolve the dichloramine-T in the chlorinated eucalyptol first and to add the paraffin oil last.

The mixture, as we used it at the West Side Hospital, was made by dissolving 6 Grams of dichloramine-T in 12 mls of eucalyptol and then adding 18 mls of paraffin oil. This would make a 20-percent solution which was used on wounds, especially infected wounds. For burns, we dissolved 1 1-2 Grams of dichloramine-T in 6 mls, of eucalyptol and then added 4 mls. of paraffin oil. The reason for the reduction in the oil of eucalyptol is, that it was too irritating. For nasal, oral, or ocular use we take 0.5 Gram of dichloramine-T, 3 mls of eucalyptol, and 7 mls of paraffin oil.*

Dichloramine-T is best applied by means of an oil spray, or an all glass "atomizer," the latter being best as metal and hard rubber are slowly affected. It may also be poured into wound cavities and it can easily be introduced into sinuses by means of a cotton swab dipped in the solution. The amount of the solution needed for each treatment is extremely small, 1 to 2 mls being sufficient for most moderate-sized wounds, and it need not be renewed more often than once in twenty-four hours. A minimum of dressings is required and they do not stick to the granulation tissue. Like most other antiseptics of the chlorine group, dichloramine-T is an active lymphagog when placed on fresh wounds. As granulation tissue develops, the lymph discharge decreases and the wound becomes comparatively dry. It also possesses in marked degree the property of aiding in the removal of necrotic tissue. The first application of the oil-solution causes a smarting sensation, which, however, passes away in a few minutes. Wounds treated with the oil fill rapidly with granulation tissue of healthy color that shows no ten-

*Since this paper was written the author has begun the use of Dakin's new solvent, Chlorcosane, a chlorinated paraffin which is odorless, tasteless, nonirritant and very stable. Reference to this is made later in the article.

dency to exuberant growth nor to become sodden.

Experiences at West Side Hospital

In the last eight months we have had occasion to use dichloramine-T on over sixty-five cases at the hospital, most of which were cases of Dr. T. A. Davis (who has used it entirely on all his surgical cases), Dr. W. S. Royce and Dr. C. R. G. Forrester. We have used it at the dispensary rather constantly, and Dr. Rand has used the 1-percent solution for nose and throat lesions in over one hundred cases at the Nose and Throat Department of the dispensary.

These sixty-five cases were of the following nature:

Three cases of burn; in the burn cases we used the 10-percent solution, covering the burned area with one layer of coarse-meshed gauze previously soaked in paraffin wax. Although some workers reported unfavorable results with this method, yet we have had very good results.

Three ventral-hernia cases, all of which had some resection of omentum, with large herniae, and in fleshy subjects with thick abdominal walls. One of these patients was operated on under a local anesthetic, infiltrating the tissues with a 1-percent novocaine (Procaine) solution, which seemed to lower the vitality of the tissue, and, although the wound did not become infected, yet granulation and healing were delayed.

Five inguinal herniae; two being recurrent, but, which healed by first intention. The patients left the hospital in the average length of time.

Nine clean laparotomies.

One infected laparotomy. In this case there was pus in the abdomen. Appendix and tubes were removed, and the abdomen sprayed thoroughly with a 20-percent dichloramine-T solution. The case terminated as a clean case. No bad after-effects and no postoperative rise of temperature were observed and the patient left the hospital in ten days.

Four clean foot and toe cases.

Three infected foot cases. These last seven cases were all treated in Dr. Davis' service, and he used nothing but dichloramine-T in the surgical preparation. All of them, including those infected, healed by first intention, although, in many, resection

of bone, tenotomy, and transplantation of muscles and nerves had to be done.

Two ear and throat cases.

Four osteomyelitis cases. All of these four cases were old chronic conditions, two of the patients having been in the hospital for six months or more before being treated with dichloramine-T, and having been treated by virtually every other known method. Under the use of dichloramine-T the lesions cleared up in from two weeks to a month.

Three varicose-vein cases.

Five amputations of the breast.

One goiter case.

Three clean bone cases.

One infected bone case.

One hemorrhoid case.

Three head and face cases.

Two infected-gland cases.

Two abscess cases.

Eight miscellaneous cases, such as bed sores, orchitis, and other lesions.

Conclusions

1—Dichloramine-T should be used for surgical preparation of infected wounds, the parts previously being treated with benzine to remove moisture.

2—Dichloramine-T should be used for burns, the burned area being covered with one layer of wide-meshed gauze previously dipped in paraffin-wax.

3.—Dichloramine-T in 0.5 to 1-percent solution should be used for nasal, oral, or ocular work.

4—Wounds treated with dichloramine-T fill rapidly with granulation tissue of healthy color, which shows no tendency to exuberant growth nor to become sodden.

5—Dichloramine-T is best applied by an all-glass atomizer.

6—The amount of the solution needed is extremely small 1 to 2 mls being sufficient for most moderate-sized wounds, and the antiseptic not requiring renewal more often than once in twenty-four hours.

7—A minimum of dressing is required, and it does not stick to the granulation tissue.

8—In our experiences of the last eight months at the West Side Hospital and Dispensary, we have had no bad results from the use of dichloramine-T, and in only one case was there a delayed healing. Even this case did not become infected.

9—The ingredients for the preparation

of dichloramine-T may all be obtained from the Abbott Laboratories, Chicago.

Later Results

Since the results of this paper have been compiled, we have had occasion to use dichloramine-T on about 50 more cases. We are pleased to report that, although these fifty cases were of the same nature or even of more grave conditions, yet we have had 100 percent of good results.

We have been using dichloramine-T dissolved in chlorcosane for the past six weeks, and as far as we can determine our

results have not been changed. Except for the difficulty of using the chlorcosane preparation in an atomizer, it is just as efficient as the eucalyptol preparation.

We used the chlorcosane preparation of dichloramine-T in a saturated solution (7 to 8 percent) on cotton swabs or with the Lee tips to a glass Luer syringe. We place the required quantity of dichloramine-T in 4 ounces of chlorcosane and beat the mixture until the powder is dissolved, which takes place at a temperature of about 70° to 80° Centigrade.

Observations on Little Things in the Treatment of the Little People

By C. W. CANAN, M. D., B. S., Orkney Springs, Virginia

THE decrease in the birth rate of our town country and the tremendous death rate of the countries of Europe, through the agencies of war, has made it imperative for every physician to save every one of our little ones so far as lies in his power.

This undue decrease in our infant population is due to many and varied causes, but, the two main factors are: first, the tremendous decrease in the birth rate of the well-to-do classes, because of the desire, on the part of the women, to evade the suffering that childbearing entails, and their consequent practice of the art of preventing conception; and, second, the ever increasing death rate among the lower classes, owing to the overcrowding in our large cities. Taking into account the potential and actual loss of population (probably 50 percent in a decreased birth rate among the prosperous classes), the situation becomes appalling. The most reliable statistics place the number of all deaths occurring in the first year of life at 25 percent and at 35 percent in the first two years.

Thus, with war depopulating all Europe—and we do not know how far our own nation is going to be involved—it is plain that physicians must do everything in their power to save these little ones; for, they are our only hope in the years to come. There are those who claim that many of these poor, deserted, unclaimed waifs, burdened by the heritage of sin and disease,

are far better off dead than living; but, this idea is wrong, nor should we forget that these make up only a small part of the great total. Every general practitioner should make the treatment of children a special study, especially at this time, so that he may be able to render them the best of service, considering that the death of any one of these little ones may mean very much to society, to the state, and to the government.

The two leading causes of the high death rate in the cities are, first, unsanitary surroundings and, second, the poor quality of milk and water supplied. The percentage of infants requiring artificial feeding is steadily on the increase, and every thoughtful physician is aware that that of itself means a higher death rate, even under the most favorable circumstances; but, when we take into account the privations that the war is enforcing upon everyone of us, there can be no doubt that this will greatly increase the danger for our little ones. Add to this the noise and vitiated air of the densely populated centers, the poor water and bad milk, and the prospect for our future progeny is far from encouraging. During the sweltering heat of summer, these pale emaciated children present a pathetic picture, indeed.

If there are any organizations or societies that should receive the support and confidence of the people, it is those that

are laboring to furnish a better milk supply and purer air for these little ones. It is an unfortunate fact that our city authorities are not as keenly alive to the evil effects of unsanitary surroundings on infants and children as they should be. If the medical profession had never done anything else than to demonstrate the necessity of pure air and sanitary conditions for stamping out disease and thereby reducing the death rate among children, it had not existed in vain. Every physician should now redouble his energies in behalf of this army in miniature, so as not to let the spark go out of one of these, if it be possible to keep it alive.

The Care of Little Children

In referring to the little things in the treatment of the little patients, the physician should possess tact, a keen power of observation, and pay especial attention to small details. These are prime requisites for success. The symptoms are mostly objective ones. This being absolutely true of infants, then how much does the success of treatment hinge upon the power to observe closely?

Not every physician is best suited to practice among children. A physician, to be able to do his best among those mites of humanity, must be full of love and sympathy for them, must be willing to enter into their little pleasures and must understand their likes and dislikes. It is remarkable at what an early age children are able to read the physician "like an open book." There are few accomplishments that will pay the physician greater dividends than tact in handling children; it is, in fact, a rare jewel of brilliant luster. To be able to examine a child, to observe all its traits without the little one knowing what is being done, is skill of a high class, indeed. I once had a little patient whom I had never been able to examine except when asleep, not even to count the pulse, although I had talked and tried in every way possible. Then, one evening, I was called to see the girl just after Christmas. She was on her mother's lap, but, no coaxing by the latter would induce the child to allow an examination. Finally I quit trying and began to talk about Christmas presents—not to the child, but, to the mother. In a very short time, I saw her eyes sparkling. I began to tell her about

my own little girl getting a gold bracelet and that I believed that it would fit her wrist, about a doll that by pressing on the chest one could make to talk, and so on. Soon I had that child so absorbed that I counted her pulse and auscultated and percussed her chest, and she never once objected. I promised to bring her a toy the next day, and then she showed me her tongue. At my next visit, I took her a toy; and I must say that from that time on I have never had a better patient.

Leave nothing undone that will aid in establishing friendly relations between the child and yourself; gain its full confidence, if possible, and you will be able to accomplish results in treatment, that before were impossible. Of course, the greatest obstacle in doing this is, to find the necessary time to devote to these little folk. Suppose the doctor enters the house when the child is cross and nervous, the child is crying, the mother is nervous and may be crying herself, the doctor is in a hurry, and he also gets worried and nervous. What can be accomplished under such surroundings? Very little, indeed—I have been there.

Patience is, indeed, a virtue under such circumstances. The thing to do, unless the situation demands immediate attention, is, not to attempt an examination, but, to walk out or retire to another part of the house or talk about something that will interest the mother and, by all means, the child, if it be old enough, until the tears are dried and the troubled waters are calmed. Then, and then only, can you obtain a clinical picture that will not be misleading. You alone must be the judge of what method you will follow to accomplish this end.

My own experience has been that the doctor can do a great deal that will aid him in treating the children before they are taken ill, provided he comes in contact with them, when called to see some other patient of the household, by showing them some interest or making them feel that you are their friend when they are well. When you are called to see an adult, he can tell his own story; with the little folk, however, it is different; you must secure the history of the trouble from the mother or nurse and then substantiate or disprove the impressions made by the infant's own little mute signs. Every detail must be gone into. What is the baby eating? How much?

How often? When and how does it sleep? Its baths, habits as to fresh air, besides a hundred other little things that may help to arrive at a proper diagnosis. Many of these things you must actually see for yourself. Why, I do not know, still, it is a fact that the nurse and at times the mother will mislead or deceive you for reasons known only to themselves. A difficult diagnosis is, at times, made easy by stripping the child.

Importance of Early Training

Insist, then insist again and again upon regularity in methods of feeding, sleeping, bathing, and so forth. It is remarkable at what an early age these little people can be taught certain habits and the great amount of good resulting therefrom. They acquire knowledge by what we teach them and by their own observation. An infant can be taught to go to sleep at a certain hour, in its own bed or crib, without the breast, bottle or even a light, just as easily as the opposite. If only mothers would take advice and learn to be positive, the raising of children would not cause them one-half of the trouble and worry it usually does.

During the first year and a half or two years, and especially during the first year, the great nervous system is developing at a marvelous rate; consequently, excitement, noise, and irregular hours and habits are almost certain to produce sick babies. The nervous system is like a mine ready to explode upon the slightest provocation. It certainly is apparent to all how beneficial to the babies are regularity and quietude. Do not hesitate to condemn, and in no uncertain language, those parties who want to drag the baby from one place to another and permit everybody to handle, trot, and excite it.

The physician fails in part of his duty when he does not instruct parents and nurses with reference to punishment of children, telling the children that the black man, the policeman, or even the devil himself will get them, cut off their ears, and do other frightful things, if they do not behave. Many an idiot and nervous wreck is the result of such senseless methods. However, the worst of all these foolish practices is, among many parents, to make use of the doctor as a bug-a-boo, telling the poor youngsters that they will send for

the doctor and that he will do the vilest of things to them. I have seen children, who were so taught, resist every inducement to let themselves be examined.

The Feeding of Little Children

We now come to another, very important matter in treating little children, and that is, their feeding. This is especially true of those that are being artificially fed. Raising babies on artificial food is a fearfully discouraging task. If attention to little things counts anywhere, it certainly does in artificial feeding; counts not only for a day, but, for weeks, months, and sometimes for years, even life. The majority of sick, emaciated, rachitic, deformed children that we see are the result of poor artificial feeding.

This problem is one that calls for the most concentrated thought and consideration, and the details must be minutely carried out.

To be sure, with regard to the proper assimilation of any food, it is necessary to study the infant's individual requirements. Each child is a law unto itself, and its individual wants must be studied out. One child will gain on the same mixture on which another will lose weight. The infant must appear satisfied after taking its bottle. There should be no vomiting or colicky pains. The bowels should move, unaided, at least once in twenty-four hours, and twice is better.

The infant should sleep from sixteen to twenty hours out of each twenty-four, up to its sixth month of age, and it should sleep from four to eight hours consecutively during the night.

The infant's weight should be taken regularly once each week. If it thrives as it should, it should gain at least 4 ounces each week, while 6 or 8 is much more convincing that the diet is near to being correct. If the child fails to gain, there is something wrong and an investigation should be made at once. By all means, change the food.

The physician should have a clear idea of the child's power to digest and assimilate food; he should have a knowledge, also, of the percentage of food-values contained in the best brands of artificial foods on the market, when pure milk can not be had. To these we must add the knowledge of how to prepare foods, so that they

can be digested with as little effort as possible. One point just here: do not permit the use of sterilized milk when it is possible to do otherwise. Never heat milk hotter than to the normal temperature of the body, unless there is some special reason for so doing. I am thoroughly convinced that to heat milk more than this makes it harder to digest, and that the higher the temperature, the poorer its food-value becomes, because the infant can not digest it.

The Medicinal Treatment

The medicinal treatment of these little patients is the last branch of our subject and the most important of all, and it often taxes our patience and our resources to the limit. Parents, by their lack of tact in dealing with their children when medicine had to be given, have caused the practitioners trouble and worry without end.

To be able to prescribe or to leave remedies that are pleasant for the little ones to take, is an accomplishment that few of us possess. I know of no one thing or remedy that has done so much to put the babies against taking medicine as castor-oil. This old remedy has been forced down so many children, and on the slightest provocation, that it is no wonder that they think all others are like it. I have, for years, tried every way I was capable of to make my remedies for these little ones as pleasant to the taste as possible, but, I have never gotten very far. There are so many drugs that we have to prescribe for these delicate palates, the taste of which it seems impossible to overcome and in some instances even to modify in the least. However, pharmacists have done much within the last twenty-five years to aid the physician in this difficult task of making the drug-treatment of infants and children less obnoxious.

The introduction of the alkaloids and other active principles has been a godsend to those who have to treat these small persons or that class of patients who always are howling about the bad taste of medicines. The general practitioner or the pediatric doctor who has never prescribed the active principles has a surprise coming

to him, if he will use judgment and a little skill in combining and prescribing them for children and fastidious adults.

Many of the active-principle drugs are almost tasteless when dissolved in plain water, while those that are not often can be made palatable by adding a little glycerin or appropriate flavor to the solution. Do not fail, by appropriate means, to color your solutions; for, children are very much influenced by pretty colors, and, to their little minds, a solution so beautiful can not be bad to take. I make it a rule, when treating timid or rebellious children, to learn, if possible, whether they are partial to certain flavors. A few years ago, I had a little patient who would not take any medicine, without a "scrap," except castoria. So, I never failed to add this particular flavor to her medicines, and then she took them without a word, until she was old enough to be reasoned with. Nowhere in the whole line of medical science has there been greater advancement than in pharmacy.

The day is past when sick people had to take large doses of tinctures, extracts, decoctions or bulky powders that had a taste long to be remembered. There are few of the older ones among us who do not remember with horror the old decoction of "salts and senna" that was poured down our throats without ceremony when we were children or the dose of calomel given each spring and fall, whether indicated or not—this dose being measured on the point of grandpa's pocket-knife-blade. These doses always were large enough so as to keep the victim sick most of the day following.

It really is marvelous what improvement the manufacture of the alkaloids and active principles in general has wrought over the old preparations made from the whole plant. This improvement has made the treatment of children a pleasure, to a certain degree at least, it has been the means of relieving much suffering, such as was not possible in former days. Through the skilled application of them, the present death rate can be reduced, and childhood will be robbed of one of its greatest terrors—the fear of taking "nasty medicine."



After Thirty Years—V

Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from August issue, page 583.]

The Medical Code of Ethics

REPEAT false propaganda often enough, plausibly enough, and persistently enough, and there will be found many to believe it, and sometimes the majority will act accordingly for a time. Which is only another way of putting Lincoln's well-known apothegm, that "you can fool some of the people all the time and all of the people some of the time, but, you can not fool all of the people all of the time." This reflection is the first thing that comes in to my mind in considering the subject of ethics, because of the attitude assumed by many in the profession toward the code of ethics. For some years past, if the subject of the code came up for discussion where any considerable number of doctors were gathered together, the matter was pretty sure to be treated more or less contemptuously, the majority being inclined to ridicule it, while the defenders of the code were but few or fainthearted. One was pretty sure to hear such expressions as: "a lot of antiquated drivel," "a harmless collection of goody-goody platitudes," "an attempt to make Sunday-school children out of the medical practitioners" and the like.

The reason for this state of affairs is not far to seek. The sharks of the profession and the quacks who are trying to break into the profession deride the code, because it interferes with their plans for plunder, so, their clamor is loud and persistent, while at the same time their efforts are quiet and insidious, as best serves their purpose. In the meantime, the honorable part of the profession has its attention upon other things and is not fully awake to the efforts that are being made to debauch public opinion both inside the profession and outside among the laity. The circumstances are analogous to those under which the enemy propaganda was carried on in this country before we entered the war.

The superior efficiency of all methods and things Teutonic had been dinned into

the American ear so long and so persistently that up to the time of the sinking of the *Lusitania* a large part of the American people believed that Germany led the world in the efficiency of her workmen and in the achievements of her scientists, and the world was slow to believe that a nation claiming to lead in civilization could be guilty of unspeakable atrocities. However, events soon showed the truth. When the interned German ships in our ports had their machinery so damaged by their crews that they believed they could never be repaired, not only did American workmen in an incredibly short time render them fit for service again, but, they improved so much upon their original designs that the ships were faster than before. Also, investigation proved that German scientists were mostly imitators and adapters of the discoveries of others. Most of the great discoveries in science in the last hundred years have been the work of scientists of other lands. When our people began to open their eyes to the true state of affairs, the awakening was rapid and complete.

Similarly, an enemy has been lulling the medical profession into a slumber of false security in the matter of ethics. For two or three centuries, the profession has held a position high in the respect of the public, because it maintained a high standard of honor; but, in the last quarter of a century, it has lost a considerable part of that esteem, because it has gradually lowered that standard. The code of ethics has been neglected and ignored. If we could take a census of the doctors graduated in the United States in the last twenty-five years and could put to each one the question, "Have you read the code of ethics?" the answers would be discouraging. I do not believe that five percent could truthfully answer "Yes," and I base this opinion upon conversations with students and recent graduates as well as with medical teachers. Those who speak slightly of the code as a rule are those who have not read it and who take their opin-

ion from what seems to them the popular idea.

The blame for this state of affairs must rest mainly upon our medical colleges. How many of them have a chair on ethics? How many of them give their advanced students even a single lecture on ethics? I do not know of one. In some of them, an individual professor of some other chair, seeing the need, may perhaps volunteer a lecture upon the subject; but, if he does, he is likely to be warned by the powers that be that he had better not do so in the future, as it has a tendency to give offense. The milk in the coconut consists in the fact that a good many of the students are earning the money to carry them through college by practicing some one of the forms of quackery that are so popular among the laity at the present time. To permit anything that would seem like stepping on their toes even indirectly, might affect the financial affairs of the college.

High Ethical Standards in Former Times

I have just finished reading Dr. Benjamin Ward Richardson's "Disciples of Æsculapius." The learned doctor has written in this work upward of forty brief biographies of some of the ablest men in the profession up to the middle of the last century. Most of them were English and Scotch, a few were French, Dutch, and Italian, and one was an American—Dr. Benjamin Rush.

The two strongest impressions left upon my mind by the reading of this remarkable work are, first, the fact that we are not as far ahead of our forefathers as most of us have imagined, and, secondly, the contrast between the ethical atmosphere of those times and that of the present. The gifted author, without apparent effort, indeed, without appearing to be conscious that he is doing it, lifts the reader into an atmosphere of ethical purity, by taking him for the time being into the company of men who were the finest type of what a refined, cultivated gentleman should be and who made the profession an exemplification of the highest ideals of character and conduct.

The profession of today has fallen short to some extent of those ideals. The laity do not hold us in the respect that they once did. The family physician who was

guide, philosopher, and friend still exists, but, in greatly diminished numbers. A spirit of commercialism has become more and more predominant.

Why is this? What have we done or failed to do that accounts for the change? It is not that we have inferior material to draw upon in replenishing our ranks. I think it is partly because we have not insisted upon thorough preliminary education and partly because we have too much ignored the subject of ethics itself. It is the tendency of the age in which we live to give less attention to forms and ceremonies than did our ancestors.

A similar condition exists in the field of religion. Many good people mournfully contemplate the apparent neglect of the church in our day. It is unquestionably true that less attention is being given to creeds and church ceremonial than was the case a generation ago, and, if those things constituted all there is of religion, we should have to admit that we have retrograded. But, anyone who will take a broad view of the situation will admit that the things that religion is intended to develop were never so strong in the hearts of the people as today. No better proof of this fact is needed than the insight into the hearts of the people as furnished by the present war. Christianity need never be ashamed of its work, when it can point to the spirit of self-sacrifice and of protection for the weak shown by the people of the nations that are fighting for the liberty of the world.

And so with the medical profession. There is less attention to forms, but, the profession is sound at heart. It would, perhaps, be better if we paid more attention to rules and were stricter in the matter of keeping our ranks clean and free from men of doubtful beliefs and practices; but, then, the tendency of the age is, to exercise a large tolerance toward those who differ with us, whether it be in medicine, religion or politics. This is a wholesome tendency, in keeping with the spirit of the age, which is the spirit of liberty.

Hold Fast to the Principles

However, we must take care that in the exercise of this broad tolerance we do not abandon principles, for, that is the first step in degeneration. We shall be culpa-

ble if in good-natured indifference we encourage or seem to encourage those who would delude and plunder the public, under the cloak of a pretended science. These pseudo-scientists are numerous, powerful and cunning, and the toll they extract from the pockets of the public is an enormous one. They are untiring in their efforts to secure favorable legislation, and in spreading their propaganda among the people. It is for us to see that the public is informed of the real facts of the case, in other words we must individually do our parts in a campaign of education. To that end we must begin with the medical profession itself. There is much work to be done in that direction. Not only must the indifferent be roused to take an interest in the matter, but, many of them need instruction.

At the very foundation of a system of medical ethics, there must lie a clear idea of the proper relation which scientific medicine bears to the various substitutes that have been proposed—the so-called “schools” of irregular medicine. Even among the members of the profession, there exists a great deal of mental confusion on this point. There are many doctors who have never clearly grasped in their own minds the distinction between regular and irregular medicine; and, as for the laity, their ignorance upon the subject is profound. I have often heard members of the regular profession accept the term “Allopath” when applied to them by others, and even to go so far as to apply it to themselves.

Is it, then, any wonder that the public believe that the regular profession is simply a “school,” a large one, they admit, but, still, a “school,” on a similar footing with all the various “pathies” and systems that have tried so hard to destroy public confidence in scientific medicine? The term “Allopath” conveys a falsehood; it is a misrepresentation of our position; a term of reproach applied to us by our enemies. To accept the name, is, to help the enemy load and fire his biggest gun. Allopathy means “the other pathy” and was applied to us for the purpose of making the public think that we were simply another “school.” The fact that there can be no “schools” in science, that, as soon as we pin our faith to a “school” we cease to be

scientific, can not be too strongly emphasized.

All science is based upon the broad principle of observation and experiment. On the other hand, each of the “schools” is based upon some one special theory, the truth of which can not be demonstrated so clearly as to carry conviction to the great body of scientific men. If a thing is true, it can be proven to be true. There can be no other safe test to apply. Faith has no place in science.

The distinction between regular and irregular medicine can be put in a nutshell by saying that the former is based upon a principle, the latter upon a theory. Each school of the latter rests upon a different theory, and each has failed to convince the majority of thinking men that their particular theory is correct.

There is nothing in the requirements of scientific medicine that would prevent a regular practitioner from making use of the treatment of any of the irregular schools if he can get results with it. The harm consists in putting forth a claim that can not be proved as a bid for public patronage.

The whole group of irregular practitioners base their hope of success upon a shrewd recognition of two or three well-known weaknesses of human nature. In the first place, the marvelous and mysterious always makes a strong appeal to the unthinking man. He will quickly catch at the idea that the decillionth part of a grain of charcoal can produce an effect on disease, or that disease can be cured by persuading oneself that it does not exist, or that all diseases are produced by a dislocated spine. Secondly, the common mind is very susceptible to suggestion. Do something impressive or unusual, and then tell the patient he is better, and he really believes he is.

Thirdly, the ignorant man is very suspicious of motives. If we point out to him that he has been humbugged, his mind is closed to reason, for, he thinks that we are moved by jealousy.

So, fortified by these traits of human nature, the irregular feels himself secure in his hold on a large portion of the public.

[To be continued.]

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Cell Environment*

By ALBEN YOUNG, A. B., M. D., Chicago, Illinois

NO argument is required to convince us that we all react to our environment. Indeed, it would appear that the main reason why one man differs from another is because of his environment. The rich man and the poor man, the city man and the country man, the mountaineer and the plainsman, the good man and the bad man appear, act, and differ largely because of the conditions of their life-surroundings. I have no explanation of this phenomenon to offer; I am content with the fact that man is influenced by his environment. Since man, as a whole, is thus influenced, the question arises, naturally, are the myriads of cells that go to make up the man influenced by variations in the surroundings and conditions of life of the individual cells?

A rude parallel can be drawn when we compare the history of man, from a primitive state to civilization, with the evolution of the single cell or ameba to a complex organism. Primeval man lived alone, fighting for an existence, neither giving aid to nor receiving aid from his neighbor. When, by and by, he learned the value of cooperation, families, clans, tribes, communities and nations successively were formed. With community-life came division of labor and all the complexities that make up modern civilization. Similarly the single-celled ameba, unaided, performs all the functions of life. There are low forms of animal life with such extremely rudimentary organs that it would appear as if the cells were trying the experiment of community-life and division of labor. The perfected system and orderly life of the cells in the higher animals may be compared with the intensive life of modern civilization. One well may compare the leukocytes to a trained army, ready and able to repel invasion by their enemies, the bacteria, or also to skilled mechanics capable of repairing damages to the organism, of which they are a part. They seem to think; indeed, the intelligent way in which the fixed cells take in food, expel waste

material and do their appointed task would suggest thought.

Histology treats of the physical characteristics of the cells; physiology tells of the manner in which they perform their functions; bacteriology is a study of their enemies; nothing, though, is said about the conditions under which they live—that is to say, their environment. We do not know much about the influence which the varying states of the blood stream exert over the health and activity of the corpuscles circulating in it; we know still less of the manner in which the lymph (which we are told bathes all cells) ministers to the welfare of the various cells of the organism.

Cell Environment and Pneumonia, Tuberculosis and Cancer

Now let us consider, briefly, with reference to cell environment, the three great enemies of man—pneumonia, tuberculosis, and cancer.

When an apparently strong, vigorous man comes down with pneumonia, the anxious friends ask, "Why was this man stricken?" The usual answer is that he must have been infected during a period of "lowered resistance." The phrase "lowered resistance" has been somewhat overworked, especially since it does not mean anything in particular. Then, what conditions were present to bring about the catastrophe called pneumonia?

It may be stated as a fundamental proposition, based on common observation, that pneumonia does not occur unless there is a polluted blood stream. The extremely efficient leukocytes are abundantly able to suppress every kind of pneumonia-germ in any number so long as conditions remain normal. But, whenever the toxins in the blood increase to the extent of interfering with the proper functioning of the leukocytes, the ever-present, ever-alert pneumococci may gain entrance into and flourish in the blood. That means that a pneumococcus-infection will take place somewhere.

These polluting toxins may be endogenous or exogenous in origin. The retained toxins of nephritis and the toxins of old

*Read at a meeting of the Ravenswood Hospital staff, June, 1918, Chicago, Illinois.

age are examples of those of endogenous origin, while alcohol is the most common example of those of exogenous origin. A man may overeat and drink too much, with apparent impunity, so long as the eliminative organs are able to keep down an undue toxemia. But, the burden may become too great for these overtaxed organs when there is a "cold" or a chilling of surface of the body or a stuffy room where the skin can not function properly. In the aged, the rising tide of toxins may be kept down by dieting and watching the elimination; still, sooner or later—provided one attains old age—one is overwhelmed by his own poisons, when an insignificant pneumonia rings down the curtain and ends the scene. It is a natural ending.

As a general statement, it may be said that, in case of pneumonia, unless the attack is a terminal pneumonia, someone is to blame. The victim is paying the penalty of his wrong mode of living or of an environment over which he has no control. As a rule he has no one to blame but himself.

Statistics in regard to the mortality rate of pneumonia indicate that our present management of the disease does not give any better results than did the treatment employed a half century ago; indeed, it is doubtful whether we are getting as good results. Perhaps our patients' manner of living nowadays is more conducive to pneumonia and entails an inability to produce the necessary antitoxins.

The management of tuberculosis has been established upon a pretty firm basis, while that of the other inflammations of the respiratory tract still is in the chaotic stage.

Two Principles to be Remembered

There is need of a definite grasp of certain underlying principles in the treatment of pneumonia and allied conditions. Such a conception would stabilize our management of these cases. These principles are based upon two well-established facts. (1) In the embryo, the respiratory tract is an offshoot from the digestive tract, and both have an epithelial lining of hypoblast. We, therefore, should expect them to have much in common, and, as a matter of fact, they do. We expect infants having a "cold" to have digestive disturbances. And they do. So, also, we observe that the individual having a loaded colon and an enlarged liver is prone to bronchial affections

and pharyngitis. (2) We notice that our pneumonia-patients, when they succumb, die of toxemia; also, that treatment does not change the sequence of events in the lungs. Doubtless, it is fortunate that we can not interfere with the defensive and reparative processes of nature; still, we can control conditions in the alimentary canal and thereby influence favorably the course of inflammations in the respiratory tract. We can exercise our best judgment in regard to the intake of food. We can see to it that the elimination of toxins through the bowel is satisfactory.

These two principles should be kept in mind in the management of all inflammations of the respiratory tract. The first is, as stated, the embryonal and anatomical relation between the alimentary and respiratory tracts. The second is a corollary of the first: keep the alimentary canal functioning in the best possible manner.

Therefore, if we accept the statement that a pure blood stream prevents pneumonia, we can accept the conclusion that a pneumonia-patient will be benefited if we can prevent food-toxins and the toxins of putrefactive and fermentative changes occurring in the bowel from being absorbed into an already polluted blood stream.

In the tuberculously inclined, the individual cells did not get a proper start in life; they do not possess the inherent vigor necessary to combat successfully their hereditary enemies—the tubercle-bacilli. Yet, even so, environment is a large factor in their life-history. Suppose an infection has occurred and countless cells have lost their lives. The surviving cells, under favorable conditions of environment (i. e., bathed in a lymph that is rich in oxygen and the required food elements), manage to live pretty comfortably with the tubercle-bacilli. The tubercle-bacillus is not such a dreadfully bad creature. It is when it associates with the disreputable families composing the various groups of the streptococci and staphylococci that there is created an environment that is intolerable for the cell. The tubercle-bacilli possess the power to elaborate an unknown substance that produces upon the organism as a whole an effect surprisingly similar to that effected by the internal secretion of the thyroid gland. One wonders whether the genius of Robert Louis Stevenson was

helped or hindered by his tuberculosis-infection.

This strange toxin of the tubercle-bacilli is, probably, the only thing that ever cured a case of dementia præcox. To be sure, the patients died of the mixed infection. Still, there was a period of recovered mentality before death that only can be explained by supposing that the environment of the cells that preside over mentality was somehow so changed by the tuberculosis-product that they were able to resume their power of functioning normally. Certainly there was no change in the cells themselves that could be discovered by any methods of investigation now at our command.

The Riddle of Cancerous Neoplasm

What about that strange aggregation of cells we call cancer? What has happened to the orderly purposeful life of the cells? The individual cells appear about the same. Some of the more highly specialized ones are replaced by the humbler ones. But, there is nothing in their appearance to indicate an inability to serve a useful purpose. What has occurred to change the innocent cells to a menacing monster? We know that cancer occurs more commonly in old age and in organs that are undergoing involuntary or devoluntary changes (such as in the uterus when its life-work is done).

Considering the phenomenon of age, we compare the moist palm and bright eye of the child with the moist eye and dry palm of the aged—the sweet odor of the child's body with the rather unpleasant odor of the very old. Something has taken place which escapes the microscope and all known

laboratory tests. Conditions have changed. The environment of the cells is different. The degenerating cells may throw off some irritating toxins. We know they are tortured with waste material that they can not free themselves from. In cancer, some change has occurred in the serum or lymph of the patient which produces or encourages cancer growth. The surgeon tacitly admits this in the care which he exercises when removing a cancer to prevent the carcinomatous mass from touching the open wound. He has no fear of infecting himself.

The laboratory-workers can produce the semblance of cancer by continuously irritating the tissues with coal-tar injections. But, as soon as the abnormal conditions were removed, the tissues promptly recovered. In the experiments, the cells did not lose their ability to readjust themselves to the organism as a whole to take up again an orderly existence. In true cancer, the cells no longer live in quiet, orderly communities, doing the work imposed upon them; they have become hopelessly insane, useless, destructive, thriving in the abnormal environment which was their undoing.

Doubtless, you are wondering what profit there is in this little adventure into a realm of mingled facts and fancy. Not much, possibly. And, yet, it is good for us occasionally to get out of our accustomed way of thinking and look at things from a new angle. There is need from time to time of new visions to open up new vistas of thought. Otherwise, our beloved profession would be headed toward the blank, dead wall of pedantry.

The Treatment of Chronic Diseases

Diseases of the Nervous System

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[Continued from August issue, page 591.]

Locomotor Ataxia

(*Tabs Dorsalis.*)

THERE is, perhaps, no disease in which the patience and resource of the physician are so exhaustively taxed as in *tabes*. No very brilliant results are to be expected from any treatment that we can

apply. Yet, on the other hand, there is perhaps no disease—certainly no disease of the nervous system—in which the efficacy of modern, intelligent, aggressive therapeutics has made such marked improvement in the past ten years. Obstinate and tedious as it necessarily is, *tabes* no longer is the hopeless affair that it used to be. A large part of this betterment in the out-

look is owing to the greater promptness with which the disease nowadays is recognized and the corresponding earliness with which proper treatment is instituted—a most important consideration, since it is only at the beginning of the trouble, before considerable damage has been done to the neurons, that any substantial benefit can be derived from therapeutic treatment. When once the neurons have degenerated and been replaced with neuroglia, there is no way of restoring them. But, if the case can be caught in its incipency, a great deal can be accomplished in the way of arresting further degeneration, and heading off many of the more distressing symptoms.

Upon the assumption that tabes is essentially a sequel of syphilis, and providing the case comes to us in the very early stages (especially if a Wassermann and spinal test give a positive reaction), it is advisable always to administer an injection of arsphenamine (salvarsan). My experience is that it is better not to give a full injection of this remedy, but to divide it into three separate administrations of 3 decigrams each, made at intervals of three or four weeks. Even if the syphilitic etiology be waived, this is an excellent measure if carried out in the earliest stages of the disease, on the sheer basis of the therapeutic efficacy of the arsenical preparations. Some practitioners prefer to use sodium cacodylate; but my experience has led me to use the arsphenamine whenever it can be conveniently administered under proper conditions. This treatment, of course, is not invariably beneficial. In many cases it disappoints. But in at least a half of the properly selected cases it is efficacious; and where it does good at all it usually brings about a very marked improvement, and favorably influences the entire course of the disease. From mercury and the iodides, on the other hand, I have never seen any marked results. More often I have seen the patient become noticeably worse in every respect under these medicines, especially under mercury.

As a rule, after the administration of arsphenamine, if it has had any favorable effect at all, the severe pains of tabes subside—not altogether, but enough to be quite bearable and so that they do not seriously interfere with the patient's comfort and

rest. If they are still troublesome, they will usually yield to salicin in 10-grain doses, or sodium salicylate in similar quantities. Only in the extremest cases is it advisable to give opiates, in which event it is best to give codeine in comparatively full doses, to tide over the emergency. If codeine is seemingly inadequate, then, as a last resort, we may give morphine in combination with hyoscine, 1-4 grain of the former and 1-100 grain of the latter, with strychnine or atropine to guard the heart. Many patients respond nicely to cannabis indica, or, better still, to the alkaloid cannabine, since the preparations of cannabis are notoriously unreliable in potency. Accetanilid often is beneficial in the pains of locomotor ataxia. Frequent warm baths also are very efficacious in relieving the pains.

It should be borne in mind that tabetic patients almost invariably suffer from cardiac and digestive troubles, which are often the source of almost as much distress in themselves as the more direct phases of the disease. A careful examination should be made, from time to time, of the patient's heart, and any tendency to irregularity or feebleness corrected with appropriate doses of digitalis or strophanthus, which in case of hyperacidity, may be combined with magnesia and a mild bitter, such as gentian or cinnamon, and given after meals. If there is general enfeeblement of the gastrointestinal function, small doses (3 drops) of nux vomica may be added to the combination with advantage. Iron and quinine, which are not infrequently recommended and given as "tonics," do not, in my experience, agree with these patients, and are better left out of their treatment.

The diet of the tabetic should be judiciously regulated with a view to his need of nutriment and his impaired powers of digestion and elimination. Especially it should be selected with the aim of avoiding gastric fermentation. Alcoholic drinks ought, upon principle, to be prohibited; but in practice this is not always feasible, or even desirable, for patients who have always been accustomed to them, and to whom their utter withdrawal would mean a severe disturbance of general health. The most that can be done in such cases is to restrict their use to the minimal extent consistent with well-being. The same ap-

plies to coffee and tea. Tabetics should take their meals upon the principle of little and often. A light breakfast on arising, a bite of lunch at ten or eleven o'clock, dinner (the heaviest meal of the day) at one, supper at five, and a glass of hot milk with a few crackers, or something similar, before going to bed, is the sort of routine they should follow. The insomnia which so frequently annoys these patients is best overcome by taking a little hot liquid food, such as milk or broth, just before retiring. Free movements of the bowels are important, and should be secured, as much as possible, by other means than drugs. Plenty of stewed fruits, and the milder citrous fruits raw; moderate exercise, especially walking; massage of the abdomen; and regular habits; will go a long way toward ensuring proper activity of the bowels. But it does no harm, and probably much good, to give them occasionally a sulphur and phenolphthaleine cathartic at night followed by a saline laxative in the morning.

The specific treatment of tabes has for its objective the arrest of the degenerative process in the neurons, and, as previously stated, is of avail only if applied in the early stages of the disease. After the administration of the third divided injection of arsphenamine, as set forth above, if it has markedly benefited the patient, it is my practice to keep him upon arsenic, in the form of Fowler's solution, giving two or three drops after each meal. It may be added to the mixture of strophanthus and stomachics recommended above. As long as he does well on this remedy, it may be continued indefinitely; but at the first intimation of unsuitability, it should be promptly discontinued. It should never be given in advanced cases, or where there is great debility. Patients taking arsenic should always be carefully watched for signs of arsenical poisoning, especially where there is a tendency to nerve degeneration.

In patients upon whom salvarsan in the beginning has apparently had no influence, and in those who do not take kindly to Fowler's solution, chromium sulphate is an excellent substitute. It has a marked influence in checking the progress of interstitial degeneration in the neurons, as it has in every other tissue; and it acts as a continuous mild stimulant to the bowels. It may be given in doses of 4 to 5 grains, three times a day, preferably after meals,

and continued for long periods at a time.

There is not, as a rule, in locomotor ataxia, the serious vesicular impairment that there is in myelitis. However, in a certain proportion of cases there is sufficient involvement of the bladder and urethra to interfere with a proper voidance of the urine; and in these cases it is incumbent to look after the asepsis of the urinary organs. Urotropin in 3 to 5-grain doses, well diluted with water, is, of course, an efficient urinary antiseptic, and is said to have a favorable influence upon the cerebrospinal fluid also. But it becomes exceedingly irritating when used for long periods. Uva ursi is, in my experience, just as effective, and much better suited for continued use. It may be given in 15 to 20 drop doses of the fluid extract, in plenty of pure water.

The most distressing incidents of the disease are the so-called "crises," of which the commonest are the gastric. Unfortunately, there is little that can be done for these attacks, since their real seat is not in the organs where the pain is apparently located, but in the neurons of the cord associated with those areas, being, in fact, a sort of reversal of Head's law. If they are extremely severe, their intensity must be lessened by opiates. Happily, under modern treatment, they are much less frequent than they used to be, and when they do occur, are not, as a rule, so severe but what the patient can outlive them. In cases that can be helped at all, the best treatment for the crisis is the treatment of the underlying disease. In hopeless cases, of course, the use of opiates is both necessary and justifiable.

Electricity, in any of its forms, is not of any great value in locomotor ataxia, unless it be for the moral effect upon the patient. If it be employed at all, the faradic current should be used, with one pole on the spinal segment and the other on the various sensory nerve areas—preferably with an ascending polarity. Reversals and violent alternations are to be avoided. Or it may be applied through the agency of a bath. But, as stated, I have never been able to satisfy myself that it did any good beyond its moral influence.

When the ataxia has advanced to its limit—and it usually reaches a point of arrest—a systematic series of exercises should be instituted for the purpose of reeducat-

ing the coordination, and patiently carried out over a period of several months and even years. Such exercises not only achieve their physiological purpose, but are of immense psychological value, giving great encouragement to the patient and remedying that proportion of helplessness which is always present as the result of a moral "giving up" on the part of the mind.

Hereditary Ataxia (*Friedreich's Ataxia*)

Nothing can be accomplished by medicinal treatment. The general management of the disease is the same as that of locomotor ataxia, which it resembles. Especially the same muscular exercises should be carried out in an attempt to develop taxic control of the neurons. But it is a much more difficult and disappointing task than in tabes, because of the lack of previous taxic experience on the part of the patient.

Spastic Paraplegia

(*Primary Lateral Sclerosis. Motor Tabes.*)

This disease bears exactly the same pathologic relation to the motor tracts of the spinal cord that tabes dorsalis does to the sensory. The treatment is in all respects the same, except, of course, that there are no sensory symptoms to combat. But we cannot look for the same degree of success with our reeducational measures in this condition that we attain in locomotor ataxia, because in the latter disorder the motor mechanism is practically intact, and it is a question only of developing control of the motor neurons, whereas in spastic paralysis it is the motor mechanism itself that is disabled. However, we must do our best to educate the patient by adopting the same course of gymnastics that we use in tabes. Galvanism and massage of the muscles also are indicated here, because of the cutting off of the trophic influences of the anterior horns.

In severe cases the spasticity may be so marked as to greatly interfere with the patient's comfort, the muscle leaping into spasmodic contractures at the slightest stimulus. This annoying condition is best met by hot baths. If it be exceptionally severe and persistent, the patient should be placed in a continuous bath and kept there until it subsides.

The same medicinal remedies that are

recommended in tabes are equally applicable here.

Amyotrophic Lateral Sclerosis

This disease is essentially the same as spastic paralysis and the treatment is identical. However, since in amyotrophic lateral sclerosis the entire lateral tracts, from the cerebral neurons down, are involved in the degenerative process, treatment is practically hopeless, and the disease invariably ends in death, usually by an extension of the paralysis to the bulbar nerves, compromising deglutition and respiration. Electricity is useless.

Progressive Muscular Atrophy

Not much benefit can be expected from any kind of treatment. As it is not an interstitial degeneration, but an atrophy, the remedies which are often useful in checking the disease process in degenerative conditions of the neurons are ineffective here. Lecithin may help to retard the wasting of the nerve tissues. Galvanism, applied daily, with the poles respectively on the spinal segments and on the affected muscles, and continued persistently, for months and years, will somewhat retard the atrophy of the muscles themselves, but it is evident that it cannot have any influence upon the neurons. The same applies to massage. Gymnastics serve to make the most of the motor power as long as it lasts, but nothing more. Gowers recommends the daily subcutaneous injection of strychnine, 1-100 to 1-40 grain, but to me this seems an irrational therapy, on the principle of whipping a tired and disabled horse. The disease usually lasts from ten to fifteen years, and terminates as a rule with bulbar paralysis.

Multiple Sclerosis (*Disseminated Sclerosis of Brain and Cord.*)

Treatment of this disease is wholly unavailing. Yet the physician must make the attempt, however hopeless it may seem, to arrest, or at least retard, the process of the degeneration; and to this end the same means are applicable as are recommended in chronic myelitis. Rest, good hygiene, and wholesome, easily assimilated food are, after all, the most important factors in the treatment. As the end approaches, especially if it takes the form of bulbar paralysis, it is almost always necessary to employ narcotics; and, of course, we need not hesitate to give opiates to the extent de-

manded by the circumstances, since our only aim is to make the patient's last days as tolerable as possible.

Progressive Bulbar Paralysis

(*Glosso-labio-laryngeal paralysis.*)

The prognosis of this condition is absolutely unfavorable, especially as it is in most instances the terminal stage of some other inflammatory or degenerative disease of the brain or cord. About the only form of treatment that does any good at all is galvanism, applied with the poles on the mastoid processes daily for two or three minutes and the current repeatedly reversed. When deglutition begins to be impaired, the function may be preserved for some time by applying a galvanic current of medium strength with the anode on the nape of the neck and the cathode on one side of the larynx.

To combat the salivation, atropine should be given in doses of 1-150 grain, three or four times a day. In primary cases an attempt should be made to arrest the degenerative processes by giving chromium sulphate in 5-grain tablets, or Fowler's solution in 3-drop doses, or ergotin in 2-grain pills thrice daily. None of these, however, ever do much good; and in terminal cases it is useless to try them.

As soon as the impairment of deglutition gets beyond the help of the galvanic current, artificial feeding by means of the stomach pump must be resorted to, using milk, eggs, wine, and the various predigested foods.

The closing scenes of the disease are extremely distressing, and the physician should not hesitate to lessen the patient's suffering by a liberal use of narcotics.

Syngomyelia

There is no medicinal treatment for this disease. Its management consists solely in a proper care of the patient's person. Its course is very chronic, and death usually ensues from some intercurrent disease to which the patient's lessened resistance renders him an easy prey. The principal dangers to be guarded against are the occurrence of bedsores and the injury of the patient on account of his loss of sensibility. The former can best be prevented by washing the pressure areas with alcohol and anointing them with Balsam of Peru ointment, or covering them with a salicylate plaster. If bedsores become very exten-

sive, the patient should be placed in a continuous bath. The second possibility can be avoided by constant care on the part of the attendant, and by warning the patient himself. Intercurrent symptoms must be treated as they arise.

Syphilis of the Nervous System

The treatment of syphilis of the nervous system does not differ in any essential respect from the treatment of tertiary syphilis, in any of the other tissues of the body. It consists of two therapeutic procedures, namely, the neutralization and destruction of the morbid element of the disease, and the absorption of such gummatous deposits as have already been effected. For the first of these two accomplishments we rely upon arsphenamine and mercury; for the second, upon the iodides. The detailed method of administering the treatment, however, is perhaps a little different.

As soon as a diagnosis is made the patient should be given an injection of arsphenamine. Indeed, it is not necessary that the luetic nature of the trouble should be certainly established to warrant the administration of this remedy; for, even though the nervous disorder should prove to be non-specific, arsphenamine will do no harm, but in all probability much good. It is advisable, however, that in these brain and spinal cases the full dose of arsphenamine be not given all at once, but divided into three separate injections of 3 to 4 decigrams each, to be administered at intervals of three or four weeks. Some practitioners give the remedy in still smaller divided doses, and hypodermically; but I can see no advantage in this method, except the saving of a little trouble and pains on the part of the operator, and it is apt to be exceedingly painful and irritating, especially to patients who are already in a hypersensitive, irritable condition.

Immense improvement usually follows this initial treatment. Indeed, the surprising results that are obtained from the proper treatment of nervous syphilis, even in what appear to be the gravest and worst cases, are among the most gratifying experiences in medicine—certainly in neurology. Under the injections of arsphenamine, all of the grosser symptoms, as a rule, clear up promptly and nicely; and not infrequently this one therapeutic measure seems to effect a complete cure. But, the physi-

cian should bear in mind that he is here dealing, not with any symptomatic condition of the nerves, but with syphilis; and he should not rely upon the immediate action of a few doses of arsenic, astonishing as their effect may appear. The patient should now be placed upon a systematic course of antisymphilitic treatment, in which both mercury and the iodides are to play an equally important part and must be pushed to full systemic effect.

Everything being equal, of course, the best and most effective way of administering the mercury is by inunctions or by intramuscular injections of either the cyanide or the tannate salts. But, here, again, as with the arsphenamine, the physical and psychic condition of the patient must be taken into account. Often the stress and irritation of such injections, their effect upon the usually nervous and debilitated patient, more than outweigh whatever advantage may pertain to the intramuscular method. The writer's experience has been that, in a large proportion of his cases, better all-round results have been obtained by inunctions of mercurial or calomel ointment or by the internal administration of mercury, in combination with iodides, judiciously prescribed and modified by the addition of other medicines. Both the gastric and the cardiac functions usually are disordered, and need correction. An excellent combination, therefore, in which to give the mercury and iodides is one which contains the biniodide of mercury, sodium iodide, and strophanthus, in appropriate dosage, in a medium of milk of magnesia; to this may be added a little deodorized and colorless tincture of opium if the mixture causes any intestinal discomfort.

The general health of these patients is naturally below par. But the common practice of giving them stereotyped formulae of so-called "tonics" like iron quinine and strychnine, is worse than useless. What they need is not stimulation, so much as a gentle, intelligent regulation of their metabolism and elimination. This can be effected usually by proper attention to diet and hygiene—the latter to include both mental and physical hygiene. These patients require just the same kind of food and living that we prescribe for tuberculous people, except, of course, that it is not desirable to force the feeding. Special at-

tention must be paid to elimination—not merely the emptying of the bowels, but the deeper phases of elimination. They should receive an occasional course of colchicum and salicylates; not enough to lower vitality, but sufficient to rid their systems of waste products. If there is decided anemia, this is best combatted, not with iron, which the patient is in no condition to handle, but with nuclein and tiny doses of arsenic, say 1 drop of Fowler's solution, which should be administered twice daily after meals.

Functional Diseases

The peculiar characteristic thing about the physiologic pathology of all the functional nervous diseases is that the neurons themselves are not primarily at fault. They are merely scapegoats. They bear the brunt of some other morbid condition, and the nervous disturbance is an end-result. A quality that is common to them all is, a certain irritability and spasm, due, not to a positive exaggeration of function, but to a sort of negative disability. The neurons may be likened to a workman fretting because of a lack or poor quality of tools; and one might as well expect to get good work out of the workman in such a plight by drugging him into stupefaction as to expect to remedy the neuroses with narcotics. They merely add one form of toxicosis to another. The essential morbid state in all of these diseases is that of a nervous revenue which is not adequate to the ordinary demands of living. The rational principle of treatment is to bring the expenditure as far as possible within the income, either by decreasing the former or by increasing the latter, or both. In one sense they are the most obstinate of all nervous ailments, for, as intimated, these patients usually inherit their neurotic tendencies, and one has to do with the complex ramifications of biological stresses and strains. They are physical ne'er-do-wells, just as some persons are financially shiftless. It is almost as impossible to make solid, prosperous individuals out of either type as to change the leopard's spots. The most that can be done, with the physical as with the economic ne'er-do-wells, is to educate and help them to live within their modest income.

It is clear that in this class of diseases drugs have but a secondary value. Just

as no one would think of assisting a financially shiftless person by giving him large sums of money, so it is worse than useless to give neurotic patients large doses of medicine. Small doses, repeated as necessary, of judiciously selected remedies for each individual case, are better. And, again, as in the case of the financially in-

competent, we must not relieve the patient too much of his own physical responsibility, but judiciously coax and help him to do his functional tasks. To assist metabolism, to promote elimination, and to build up nerve-tissue,—that is about the extent of the medicinal treatment of neuroses. The rest is education and hygiene.

BACK TO THE LIGHT*

By H. E. NEGLEY, Indianapolis

*Bill, yer my pard, an' I know you will tell
Me the truth; for don't I remember well,
That ye stood beside at the time I fell;
An' ye carried me back when the boche's shell
Put an end to my part o' the show.*

*But now I'm back to the light o' day;
Just back from the shadow o' death they say;
A hopin' to soon be back in the fray,
An' a countin' the days I've got to stay;
But there's something I'm wantin' to know:*

*When the web in yer brain's got a wobbly weave,
Might angels come down from Heaven above,
With velvet step, an' the voice of a dove;
An' a touch that reminds o' mother love;—
Could there such a thing happen to be?*

*An' ye feel the press of a saintly hand
On yer brow, where the blast o' battle fanned;
An' ye hear a voice from a fairy strand
Like the music o' harps in the Promised Land;—
Could the like o' that happen to me?*

*Yes, it happen, old man, just like it seemed;
An' the things that ye felt ye might have dreamed,
W'ere true; though the glare of the battle
gleamed;
An' the shell of the Hun in the midnight screamed,
On its mission of hate and accurse.*

*'Twas an Angel of Mercy that smoothed yer brow,
An' it's God's own gift that she's with us now;
An' the Master in Heaven alone knows how
She's blessed by the depths of a soldier's vow;—
But they call her a Red Cross Nurse.*

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The American Journal of Clinical Medicine.

What Others are Doing

DEHYDRATION OF TISSUES IN DIARRHEA AND VOMITING

An experimental investigation on diarrhea and vomiting in children, published by Doctor Mellanby in *The Quarterly Journal of Medicine* for April, 1916, is referred to in a recent issue of *The Lancet*. Doctor Mellanby showed (1) that, if the body-fluids are below normal, the absorption of toxins from the intestine goes on at a maximum rate and the absorbed toxic substances have their full toxic action, and can not be made harmless by the tissues of the body. (2) Water in the intestine delays the absorption of toxic substances. (3) Magnesium sulphate, in a concentration of 2-percent or over, delays the absorption of toxic substances from the intestines.

These findings have an important bearing upon the treatment of diarrhea and vomiting, not only in children, but, also in adults. In severe vomiting, it frequently is the custom to forbid the ingestion of all food, including water, despite the distressing thirst that these patients manifest. If the symptoms are due to a bacillary infection of whatever nature, it is unavoidable that the withholding of fluid promotes the injury accruing from the disease and that the very thing we desire to prevent is encouraged, that is, the absorption of toxins and their deleterious action.

We all have held that in intestinal affections, barring certain mechanical conditions that preclude it, the free flushing of the digestive canal not only is a potent means to promote intestinal cleanness, but, also, that it enables the organism the better to take care of and to neutralize the toxins produced by the intestinal bacteria. Mellanby's conclusions bear out our contentions and confirm us in them. Incidentally, his finding, that magnesium sulphate in a concentration of 2 percent or over delays the absorption of toxic substances from the intestine, encourages us in our favorite custom of ordering "saline laxative lemonade"

for fever-patients, not alone for its laxative action, but, because it constitutes a cooling drink that not only is pleasant, but, has a distinct stimulating and curative action. It is a source of satisfaction to find here an explanation of the favorable action of magnesium-sulphate solution that we observed times without number.

The season for intestinal disorders is at hand, and it may be well to keep in mind, in the treatment of all diarrheas, even those that are not dysenteric in their nature, that dehydration of tissues—which is distinctly unfavorable—should be energetically counteracted; that the intestines should be flushed freely, for the purpose of inhibiting the absorption and unfavorable action of bacterial toxins.

THE PARAFFIN METHOD OF TREATING BURNS

In his oration on surgery before the Illinois State Medical Society, reported in *The Illinois Medical Journal* for July, Dr. Wm. O'Neill Sherman made the following interesting statement relative to the hot-wax method of treating burns:

"This method," the speaker said, "is generally recognized as the method of choice, in the treatment of burns, by all those who have had an opportunity to observe the results. It is to be regretted that for 16 years this treatment was available, but, because of theories and prejudice, the profession refused to give it a fair trial. It was not until the present war that the real merit of this treatment was acknowledged and given an exhaustive trial.

"The unquestionable superiority of the method over all other methods has made it the method of choice in the English and French armies and navies. The Surgeon-General of the U. S. Army has accepted the method as a valuable one and has arranged for full supplies of paraffin wax, and also the equipment necessary to carry out the use of it. Most of the failures can be attributed to error of judgment and im-

perfect technic, due to misconceptions of the underlying principles of the method.

"The wax-method has, undoubtedly, reduced the mortality, lessened the convalescence by from 30 to 50 percent, eliminated most of the pain, and reduced contracting cicatrices 95 percent. In 4,500 cases treated in the writer's service during the last eighteen months, there have been but two complications, namely, thrombosis of the femoral vein and one cicatrix that interfered with functioning. Operations restored excellent function in both.

"The improved results with this method are so startling as to be difficult to believe. The method is radically opposed to what have heretofore been thought to be basic surgical principles. While the theory and practice are diametrically opposite, the results achieved prove beyond question that we have held too tightly to theories at the expense of practice. It is generally admitted that all burns at some time or other during their course become infected. While the infection usually is of a saprophytic character and of a low grade, it is, nevertheless, present. Sealing such a wound with wax does not in any way interfere with the rapid healing of the wound.

"Let us sincerely hope that those who have assailed this method will give it a fair trial before condemning the method without having had any personal experience."

COPPER SULPHOCARBOLATE IN CHOLERA

The Prescriber (June) publishes a communication from Mr. J. Calow, Lingdale, Yorks, to the effect that he had made up a supply of tablets of copper sulphocarbolate and sent these to a medical mission in northern India. Mr. Calow recently has received a report of the wonderful effect of this remedy in a case of choleraic diarrhea. The attack was very sudden, but, thanks to the prompt administration of the copper-sulphocarbolate tablets, the patient was better, though weak, the following morning. At the time of writing, he had completely recovered. The copper sulphocarbolate was given in doses of 1-24 grain and seemed to be of great value as an intestinal antiseptic.

Mr. Calow was induced to suggest this use of copper sulphocarbolate by reading an article on the therapeutics of copper, which, appearing originally in *CLINICAL*

MEDICINE (1912, p. 717), was reproduced slightly abridged in *The Prescriber* (1913, p. 176).

We have often referred to the excellent action of the copper sulphocarbolate in diarrhetic conditions, and the experience here referred to supplies a gratifying proof of the justice of our position.

CHLORAMINE AS AN ANTISEPTIC IN OPHTHALMOLOGY

F. de Lapersonne (*Presse Méd.*, Jan. 31, 1918) found a 0.5-percent solution of sodium hypochlorite too irritating for use as a collyrium. A 0.1-percent solution proved bearable in gonococcal conjunctivitis, but, the results were no better than those obtained with permanganate solutions. A 1-percent chloramine collyrium was found quite painless. Solutions of 2- to 4-percent strength caused a temporary stinging sensation (although less than that produced by zinc sulphate) and slight conjunctival redness lasting about five minutes. An ointment based on agar-agar and containing 1 or 2 percent of chloramine was as well borne as the chloramine collyria.

Therapeutically, these preparations proved very active. In two cases of purulent conjunctivitis in the newborn, they were used independently of other measures. One case was clearly gonococcal and showed a central ulceration of the cornea, which yielded and healed in three days under treatment with a 2-percent chloramine solution; in this case, silver nitrate had already been used a week. Both patients made rapid progress under the chloramine applications. In several cases of severe ulceration, with hypopyon, the use of a 2-percent ointment, morning and evening, resulted in healing of the cornea. The chloramine seemed greatly to favor elimination of the necrotic tissues, and by the third day, the ulcers showed clean bases, ready for epithelial repair. In cases of long-standing suppuration, in conjunctival sacs, following enucleation, or in severe lid involvements, favorable effects seemed to be produced. Application of chloramine preparations for a week or two made it possible to carry out autoplasmic operations previously not feasible.

Altogether, de Lapersonne regards chloramine as a powerful antiseptic, well borne by the conjunctiva, in collyria, up to 4 per-

cent, and in ointments if a suitable excipient be selected. (*N. Y. Med. Jour.*, June 8.)

In the United States, the chloramine preparations are known under the name of chlorazene.

AN ANTITOXIN FOR THE GAS-BACILLUS

One of the most interesting therapeutic developments of the last year has been the introduction of an antitoxin for the treatment of gas-bacillus infections. This was worked out by Doctor Bull, of the Rockefeller Institute, assisted by Miss Pritchett, of the same institution.

This antitoxin is asserted to be valuable both as a prophylactic and as a curative agent. It has proven so satisfactory that already American manufacturers are preparing to put it upon the market. We are informed that a combined tetanus and gas-infection antitoxin will be offered to the profession, and that this will be extensively used in the army.

DICHLORAMINE-T IN THE TREATMENT OF INFECTIONS AND INFECTED WOUNDS

Although the majority of surgeons that have served in the present war are unanimous in declaring that the chlorine preparations are superior to all other germicidal agents, a very serious disadvantage became manifest quite early, namely, that all of the standard hypochlorite preparations were very irritating to the skin when used for any length of time. It was with a view to reducing and, if possible, eliminating this disadvantage that Dakin brought out his neutral hypochlorite solution, which is a very dilute neutral Labarraque's solution. This antiseptic agent, employed by an unusually difficult and minutious technic, yielded excellent results in the hands of Carrel and others. Unfortunately, these results could not be duplicated by all surgeons, as Carrel himself says, because of the failure to grasp and apply all details of its use.

In an effort to overcome these difficulties, Dakin set himself to the task of finding a chlorine compound that would be nontoxic and nonirritating to the surface of the wound as well as to the skin and which could be placed in contact with the infec-

tion in a menstruum that would be capable of not only containing the desired mass of germicide, but, also, of holding in solution a reserve mass for a longer period of time.

On the strength of certain technical considerations, into which it is not necessary to enter, Dakin produced, synthetically, the sodium salt of toluene-parasulphochloramide, to which he gave the name chloramine-T—better known in this country as chlorazene. While this synthetic chloramine was not irritating to the skin and could be used in aqueous solutions of from 2- to 4-percent, it had the disadvantage—like the aqueous hypochlorite solution—that its active chlorine is liberated very rapidly, in consequence of which it still is necessary to repeat its administration at frequent intervals.

As a consequence, Dakin undertook further experiments and eventually produced toluene-parasulphondichloramine, a preparation which he called dichloramine-T, and ration which he called dichloramine-T, and this dissolved, for use, in chlorcosane, (a chlorinated paraffin wax) may be used in strength up to 8 percent.

By using oil as a menstruum, a large mass of germicide was brought to the infection and, yet, held so firmly in solution that it is slowly diffused into the surrounding medium for at least as long as eighteen to twenty-four hours.

This new chlorine compound eliminates at the start the chief indication or necessity for the special Carrel technic, namely, skin irritation. It makes possible the application of an overwhelming mass of germicide, a suitable solution of dichloramine-T being approximately 80 times the germicidal mass of a 0.48-percent hypochlorite solution. Having a phenol coefficient of about 50, dichloramine-T can be presented in a larger quantity without injury to the tissue-cells than any other germicide known. Moreover—and this is an important point—instead of having this chlorine given up with explosive rapidity, as is the case in aqueous solutions, with the consequent necessity of frequent renewals, the dichloramine-T dissolved in chlorinated eucalyptol is slowly diffused into the surrounding tissues, thus making it unnecessary to renew the solution or to dress wounds more frequently than once in every twenty-four hours.

In a recent number of *The Annals of Surgery*, Dr. Walter E. Lee and Dr. Wil-

liam P. Furness say that they have records of 6,028 surgical cases in which dichloramine-T has been used and of 1,200 cases of war-wounds in a U. S. base hospital in France. Compared in efficiency in parallel cases, to tincture of iodine, it developed that the results with dichloramine-T were 60-percent better than with iodine.

An interesting comparative study was made, at the Pennsylvania Hospital, between the Carrel technic and Dakin solution and dichloramine-T. With the working-factors as nearly the same as it is possible to have them—same surgeon, nurses, and surgical asepsis, and the same class of injuries—a total of 157 industrial injuries were treated by the Carrel technic and Dakin's hypochlorite solution, with an average healing-time of 14.4 days. The succeeding three months, dichloramine-T, with a simplified technic, was used in the treatment of 281 cases, with an average healing-time of 10.4 days.

In many infected wounds, including secondary involvement of tendon, bone or joint, in which amputation was avoided because of the excellence of the germicidal preparation, also in numerous lacerated wounds and a number of extensive burns, dichloramine-T has served better than, or at least as well as, Dakin's hypochlorite solution with the complicated Carrel technic. The authors have found:

That skin irritation will not occur if the wounds are not covered with thick occlusive dressings. This means the use of the smallest possible amount of gauze dressing and bandage. The small amount of exudate from wounds treated with dichloramine-T makes it practicable to use these thin dressings, and, in the dispensary, at the Pennsylvania Hospital, there has been a saving of 75 percent of the gauze and bandages formerly used.

Dichloramine-T, unlike the aqueous hypochlorite solution, has no effect upon the knots of catgut ligatures and no disintegrating effect upon the catgut itself. The occurrence of secondary hemorrhages in wounds treated by the Carrel method was not an uncommon experience at the American Ambulance. Captain Sweet reports that, in his 1200 cases of major infected military wounds, there was not one of secondary hemorrhage.

Too great stress can not be laid upon the value of dichloramine-T as a deodorant

dressing. The absence of the usual disagreeable odors in the wards containing cases with fecal fistulae, is a general observation.

PRECAUTIONS IN THE USE OF DICHLORAMINE-T

In an extensive report on dichloramine-T in wounds (*Ann. of Surg.*, Jan.) Doctors Lee and Furness call attention to the fact that water, alcohol, and hydrogen dioxide decompose dichloramine-T and, consequently, should not be employed for cleansing the wounds. Furthermore, after dichloramine-T has been dissolved in chlorinated eucalyptol, it is slowly broken down, the chlorine being given off and the toluol-sulphon-amid, that is left, crystallized out. The chlorine liberated is partly given off into the air and partly acts further upon the eucalyptol, producing irritating volatile products. Such decomposed solutions frequently cause much irritating pain when applied to wounds. Finally, chlorinated eucalyptol itself is capable of taking up a certain amount of water from the air and the breaking down of the dichloramine-T solution is hastened by the action of light and by any rise in temperature.

For these reasons, Doctors Lee and Furness have suggested the following precautions in handling dichloramine-T and its solution.

All bottles should be of a dark-amber color and glass-stoppered. They should be thoroughly cleaned and dried before any of the materials are put in. If alcohol is used for drying the bottles, it should be allowed to evaporate completely before using them.

No solutions should ever be returned to the stock bottles from the ward bottles or atomizers.

Bottles in which the solution has already undergone decomposition should be very carefully cleaned with hot water and then thoroughly dried before being used again.

If, in using the 20-percent solution, medicine-droppers or glass rods are used to transfer the oil to the wound surfaces, the droppers should be dry if put into the oil-bottles. The common practice in some places has been, to sterilize these utensils by boiling them and then to fill them while still wet. This results in the gradual ac-

cumulation of water in the stock bottles and a very rapid decomposition of the dichloramine-T. The glass rods or pipettes or syringes, if left in contact with the oil for five or ten minutes, are entirely sterilized and do not need boiling. The method followed is, to pour the amount required for the wound into a clean, dry medicine-glass and to take the oil with the pipette from this second container.

If these precautions are faithfully observed, no trouble from the decomposition of the solution will be encountered. Thus managed, the 20-percent solution has repeatedly been kept on the laboratory-desk, in brown bottles, for three to four weeks before decomposition occurred.

THE TECHNIC OF USING DICHLORAMINE-T

In the article by Doctors Lee and Furness, referred to in the preceding abstract, the many advantages and the decided superiority of dichloramine-T as a germicidal application in infected wounds are demonstrated; the authors insist, however, upon a careful and painstaking technic in its employment. While this is not nearly as complicated as is Carrel's method of employing Dakin's original solution of the hypochlorites, certain precautions unavoidable for satisfactory results must be taken. The authors declare that infection and infected wounds must be treated with the same surgical asepsis as that followed in the care of sterile wounds, this careful asepticism being continued throughout the entire period of treatment.

In the preparation of the skin, soap and water are first used for cleansing, care being taken to plug the wound with sterile oil-soaked gauze. It has been found, however, that the use of benzin is to be preferred for cleansing the skin. Neither water, alcohol nor hydrogen dioxide should be used, as they decompose the dichloramine-T.

In infections, the focus has been excised when mechanically practicable, but, it has always been widely exposed so that the germicide may have an opportunity to exert its complete chemical effect upon the bacteria. Adequate drainage has always been provided according to accepted surgical principles. After completing the mechanical procedures, the wound surfaces are

thoroughly covered with the proper solution of dichloramine-T and then the wound edges are held apart by a generous gauze pack saturated with the oil solution of the same strength. A very light gauze dressing, of not more than four layers, is then applied. In the case of bed-patients, a clothing cradle is placed over the area, to avoid displacement of the dressing—which may be held in place by a few strips of adhesive plaster or a towel and safety pins. If the patient be ambulatory, the fewest possible turns of a lightly applied gauze bandage may be used to keep the dressing in place.

Care must always be exercised in applying dressings not to make them impervious, for, the solvent (eucalyptol oil) is a volatile oil and acts like all such oils when confined by airtight dressings. If the discharge is unusual in quantity, fresh gauze may be reapplied during the day, but, it is rarely necessary to do so. The oil should be applied but once in twenty-four hours. At the first dressing after the operation (and at all subsequent dressings), the same aseptic surgical technic is observed as at the time of operating; and at this time primary gauze drainage should be removed and none again inserted, unless the walls of the cavity or sinus collapse in such a way as to make it impossible to introduce the oil. A 5-percent solution of the oil is all that is required for secondary dressings, with the possible exception of massive infections, as in carbuncles or extensive bone lesions. Of course, an opening in the surface of the wound must be maintained for the introduction of the oil until the infection is controlled.

SWIMMING IS WHOLESOME EXERCISE

In his little publication, *Topics of Interest to Midwives*, Dr. Ferdinand Herb discusses the beneficial effects of swimming, especially for girls and women. He says that, in addition to the remarkable effect upon health and physical development in general, swimming exerts a most wholesome influence upon some special conditions that principally concern women. The vigorous and continuous contractions of the dorsal muscles strengthen the back and thus correct defects of poise and carriage; yet, while these movements are vigorous and

continuous, there is no downward pressure upon the abdominal and pelvic organs. This advantage is very important. Downward pressure frequently is hard to bear and prohibits many women from taking part in outside sports that otherwise would be decidedly beneficial to their health and development. It is for this reason that swimming may be permitted to many women who cannot take other kinds of strenuous exercise without feeling discomfort and distress. Even expectant mothers need not forego swimming and may enjoy it with safety, comfort, and profit.

Another advantage accruing to women from the horizontal position held while swimming comes from the fact that all parts of the body are about on a level with the heart. Thus, the circulation of blood is favored, especially in the legs. Consequently, the large, blue veins, caused by stagnation, that mar the thighs of many women are no hindrance to this form of muscular exertion; indeed, the trouble many times is relieved and may even be cured by swimming.

Perhaps the most beneficial, and to girls and women most important, advantage gained by swimming is, the development of the chest. Climbing hills, running, rowing, bicycling, and other sports and exercises may, also, increase the capacity of the lungs, but, none of these is as efficient as swimming. The most favorable conditions for the expansion and contraction of the chest-walls are thus created, so that in forced swimming the quantity of air driven through the lungs at a given time may be ten to twelve times that inhaled in ordinary, quiet breathing.

A well-developed chest is, in many respects, an asset of inestimable value to every mother; no girl or woman can afford to do without it, if she desires to make a success of married life. It is the mother with a well-developed chest that bears children easiest and keeps healthy; it is the mother with a well-developed chest whose beauty lasts longest; it is the mother with a well-developed chest who, other things being equal, has the healthiest and most robust children; it is the mother with a well-developed chest that is physically best-prepared for her duties in domestic and social life.

Reviewing these manifold benefits, it becomes apparent that bathing without swimming lacks most of the advantages

which bathing beaches hold in store for women. Swimming makes bathing the joyful sport it should be. Swimming encourages bathing more than any other thing. Swimming makes bathing agree with many of those who, for want of "reaction," could, otherwise, not bear it. Swimming turns weak girls into strong girls. Swimming prepares girls physically for motherhood better than will any other measure, while immeasurably adding to their attractiveness, feminine grace, and bodily endurance.

THE ILLEGITIMATE BABY'S RIGHTS

The rights of illegitimate children and the state's responsibility for seeing that every child, no matter what its parentage, has the nurture, protection, and education essential to its usefulness as a citizen are for the first time given complete recognition in the Norwegian laws concerning illegitimate children, according to a report issued recently by the Children's Bureau of the U. S. Department of Labor.

These laws make the state, instead of the mother, responsible for establishing paternity. The state holds both parents equally and continuously responsible for the illegitimate child. . . . "The child shall be entitled to bringing up . . . maintenance, training and education . . . both from its father and its mother." The report contains a translation of the several Norwegian laws, with amendments, on illegitimate children and their care. A history of the efforts through which the legislation was secured is given in the introduction.

The attitude which looks upon illegitimacy as a child-welfare problem that must be solved for the sake of the child and of the state is exemplified by this Norwegian legislation. In connection with its studies of the bearing of the war upon child-welfare, the Children's Bureau examined the evidence obtainable, but could not find that it justified the statements that have been circulated of widespread increase in illegitimacy since the war. The Bureau believes, however, that the needs of the illegitimate child must be considered in the Children's-Year Campaign, "to save 100,000 children's lives during the second year of the war and to get a square deal for children." There is need for opportunity for normal development to the child of unmarried parents.

Miscellaneous Articles

Studies on Food Economics

XVI.—Fruits. Potatoes. Oysters

THE teachings of geology show that vegetable life preceded animal existence on this earth. The oldest historical work we have tells us that the first food of man was fruit, and only after he had partaken of the fruit of the tree of knowledge of good and evil did he become a vegetarian and an omnivorously feeding animal.

Fruits contain an abundance of those organic acids most required by our bodies. The following from Dr. W. Williams is very instructive:

"I inherit what is called a 'lithic-acid diathesis.' My father and his brothers were martyrs to rheumatic gout and died early in consequence. I had a premonitory attack of gout when at the age of twenty-five, and other warning symptoms at other times, but, have kept the enemy at bay during forty years by simply understanding that this lithic acid (stone-forming acid) combines with potassa, and forming thus a soluble salt, which is safely excreted. Otherwise, it is deposited here and there, producing gout, rheumatism, stone, gravel, and other dreadfully painful diseases, which are practically incurable when the deposit is fairly established. By effecting the above-named combination in the blood, the deposition is prevented.

"The potassium required for the purpose exists in several conditions. First, in its uncombined state as a caustic potassa. This is poison, for the simple reason that it combines so vigorously with organic matter that it would decompose the digestive organs themselves if presented to them. The lower carbonate is less caustic, the bicarbonate nearly, but not quite neutral. Even this, however, should not be taken as a food, because it is capable of

combining with the acid constituents of the gastric juice.

"The proper compounds to be used are those which correspond to the salts existing in the juices of vegetables and flesh, viz., compounds of potassa with organic acids, such as tartaric acid, which forms the potassium salt of the grape; such as citric acid, with which potassa is combined in lemons and oranges; malic acid, with which it is combined in apples and many other fruits; the natural acids of vegetables generally: lactic acid in milk, and so on.

"All these acids, and many others of similar origin, are composed of carbon, oxygen, and hydrogen, held together with such feeble affinity that they are easily dissociated or decomposed by heat. This may be shown by heating some cream of tartar or tartaric acid on a strip of metal or glass. It will become carbonized to a cinder, like other organic matter. If the heat is raised sufficiently, this cinder will all burn away to carbonic acid and water, in the case of pure acid, or will leave carbonate of potassium, if cream of tartar or other potassium salt is thus burned.

"Unless I am mistaken, this represents violently what occurs gradually and mildly in the human body, which is in a continuous state of low combustion and gives off its excess of carbonic acid and water, to be breathed out, evaporated, and ejected, leaving behind the potassium, which combines with the otherwise stony lithic acid just when and where it comes into separate existence by the organic actions which effect the above-described slow combustion."

There is an ingredient of fruit, a vegetable jelly, called pectin. An acid may be separated from it, which has been named pectic acid. This acid is in combination

with potassa, soda, and lime. Fruit should be more generally used than it is at the present time. We shamefully neglect the best of all foods, in eating so little fruit, and drinking so little of fruit juices in water.

With regard to cooked fruits and jams, I have this to say: Jam for the million, jelly for the many, and fruit-juice for all. With these partaken of in abundance, abstinence from alcoholic drink will follow in a great measure, as a result of an acquired distaste and natural nausea for alcoholic beverages.

One thing I have learned in my fifty years of practice is, that vegetarians and fruit-eaters are remarkably free from the lithic-acid troubles and rheumatism, and that many who were sufferers before, have subsequently escaped when they became vegetarians.

Just here I would add our meed of praise to that noble statesman, W. J. Bryan, for the brave example he set before the nation in entirely abstaining from the use of alcoholic beverages on all occasions. I hold with the great and good Doctor Jacobi, that there is a place and use for alcohol in medicine; but, further hold that it should be strictly limited to that place. Alcohol is not a food, neither can it take the place of a food. It does not belong to the reconstructives. It is a poison, as is nux vomica, hyoscyamus, belladonna, aconite. Therefore, it acts, as all poison acts, first as an excitant and afterward as a depressant and anesthetic. Hence, its use should be confined to the medical practice and the arts and sciences.

All the popular stimulants, such as coca-cola, all refreshing drugs and "pick-me-ups" have two distinct and opposite actions—an immediate exaltation, or the calling forth of reserved power (which lasts for a certain period, varying with the drug used and the constitution of the victim) and a subsequent depression proportionate to the primary exaltation, but, as I believe, always exceeding it either in duration or intensity, or both, thus giving, as a net or mean result, a loss of vitality; and thus calling for renewed application of the stimulant.

In boiling potatoes, the bursting of the skin occurs only at quite the latter stage of the cooking. The greatest practical authorities on the potato—Irishmen—appear to be unanimous in this respect. I do not

remember to have seen a prepeeled potato in Ireland. I find that I can at once detect by the difference of flavor whether a potato has been boiled with or without its jacket and that this difference evidently is saline.

These considerations lead to another conclusion, namely, that baked and fried potatoes or potatoes cooked in such manner as to be eaten with their own broth, as in Irish stew (in which cases the previous peeling does no mischief) are preferable, physiologically, to boiled potatoes. When steamed, potatoes probably lose less of their potash juices than when boiled; still, this is uncertain; for, the modicum of distilled water condensed upon the potato and continually renewed may wash away as much as the larger quantity of hard water in which the boiling potato is immersed.

Those who eat an abundance of fruit, of raw salads, and of other vegetables supplying a sufficiency of potassium to the blood may peel and boil their potatoes; but, the poor Irish peasant, who depends upon the potato for all his sustenance, requires that they shall supply him with that element.

As regards the nutritive value of the potato, it is well to understand that the common notion concerning its cheapness as an article of food is a fallacy. Taking Dr. Edward Smith's figures of 760 grains of carbon and 24 grains of nitrogen contained in one pound of potatoes, then 2 1-2 pounds of potatoes are required to supply the amount of carbon contained in one pound of bread, while 3 1-2 pounds of potatoes are necessary for supplying the nitrogen in 1 pound of bread. With bread at 1 1-2 pence per pound, potatoes should cost less than 1-2 pence per pound, in order to be as cheap as bread for the hardworking man, who requires an abundance of nitrogenous food. More, potatoes contain 17 percent of carbon; oatmeal, has 73 percent. Taking nitrogenous matter also into consideration, 1 pound of oatmeal is worth 6 pounds of potatoes.

Observations in Ireland have fully convinced us of the wisdom of William Cobbett's denunciation of the potato as a staple article of food.

The bulk that has to be eaten, and is eaten, in order to sustain life, converts the potato-feeder into a mere assimilating machine during a large part of the day and

renders him unfit for any kind of vigorous mental or bodily exertion.

My strictures on potatoes do not apply to them, though, as used in America, where the prevailing vice of our ordinary diet is that it is too carnivorous. The potatoes we eat with our meat serve to dilute it and supply the farinaceous element, in which flesh is deficient.

The reader may have observed that most of the starch foods are derived from the roots or stems of plants. Many others are used in tropical climates, where little labor is demanded or done, and, therefore, but little nitrogenous food required.

It is within my own memory when oysters were retailed in London at fourpence per dozen. They were not then supposed to be exceptionally nutritious, were not prescribed, by fashionable physicians, for invalids, as they have been lately, since their price has risen to threepence each.

More than half a century has elapsed since Doctor Beaumont published the results of his experiments on Alexis St. Martin. These showed that fresh raw oysters required two hours fifty-five minutes and stewed fresh oysters required three and one-half hours for digestion, against one hour for boiled tripe and three hours for roast or boiled beef or mutton.

Oysters contain more than 80 percent of water, and are, weight for weight, far less nutritious than beef or mutton; less than the easily digested tripe. But tripe is cheap and vulgar, therefore, kitchenmaids, footmen, and fashionable physicians despise it.

A. T. CUZNER.

Gilmore, Fla.

THE ARMY SCHOOL OF NURSING

The establishment of an army school of nursing has now been definitely decided upon by the war department, and the Surgeon-General of the Army is sending out the following general statement of information concerning it.

The Army School of Nursing, established by the Surgeon-General under the medical department of the Army, offers to women desiring to care for the sick and wounded soldiers a course leading to a diploma in nursing, should the military hospitals continue in operation for the full period of the course. Should the cessa-

tion of hostilities occur before the completion of this period, credit for all branches of nursing completed will be given in a certificate by the Army School of Nursing, which certificate will entitle the holder to recognition by such civil-hospital training school as may subsequently accept her as a student. The school is located in the Surgeon-General's office, Washington, D. C. The training will be given in the various military hospitals and through such affiliations as may be required to provide opportunities to complete the course.

The military hospitals will provide experience in surgical nursing, including orthopedics, eye, ear, nose, and throat; and in medical nursing, including communicable, nervous, and mental diseases. Experience in the diseases of children, gynecology, obstetrics, and public-health nursing will be provided through affiliations in the second or third year of the course.

Lectures, recitations, and laboratory-work will be given in the required subjects, each hospital assigned as a training camp having its director, staff of lecturers, instructors and supervisors, and teaching-equipment.

The course will extend over a period of three years. Credit of nine months, or approximately an academic year, will be given to graduates of accredited colleges. Credit of three or more months will also be given to students that have had two or more years in college or in approved technical schools that have included prescribed courses in the sciences.

The three years will be divided into a preliminary term of four months that also will be a probationary period, a junior year of eight months, an intermediate year of twelve months, and a senior year of twelve months. Out of this period, a vacation of one month for each year in the school will be granted.

The hours of duty in the ward will be arranged in accordance with the required class-work. During the preliminary course, they will not exceed six hours daily, and thereafter will be eight hours.

Admission.—Candidates desiring to be considered for admission to the Army School of Nursing should make application in person or in writing, or through the division directors of the Bureau of

Nursing of the American Red Cross, to the Surgeon-General of the Army.

Special consideration will be given to those candidates that have taken the course in elementary hygiene and home care of the sick under the auspices of the American Red Cross, provided they meet the requirements for admission to the Army School of Nursing; and such candidates are advised to apply for the application-blanks to the division directors of the Bureau of Nursing or the instructors of the course in elementary hygiene and home care of the sick.

Candidates will be admitted in accordance with the needs of the service, the first class entering on or about July 1, 1918.

They will be assigned to the various training camps and to the services provided through affiliations, as may be determined by the dean of the Army School of Nursing.

To be eligible to the Army School of Nursing, candidates must be between 21 and 35 years of age, in good physical condition, and of good moral character. They must be graduates of recognized high schools or present evidence of an educational equivalent.

Expenses.—No tuition-fee is required. The students will be provided with board, lodging, and laundry throughout the period of the course, and also with the required textbooks. They will be required to provide themselves with indoor uniforms for the preliminary course, and, upon its successful completion, with an outdoor uniform and such additional indoor uniforms as are required during their residence in the school. A monthly allowance of fifteen dollars, to meet these and other school expenses, will be provided, except for the period of affiliation.

Full instructions concerning the uniform and general equipment for service in the military hospitals will be sent to each applicant upon the acceptance of her application.

Illness.—A student is entitled to medical treatment while on duty. This will, ordinarily, be furnished at the hospital to which she is assigned; but, in proper cases, the Surgeon-General may order a student's transfer to, and treatment in, some other army hospital. When the treatment required by a student on duty

can not otherwise be had, the necessary civilian service may be employed as authorized by army regulations. Bills contracted by a student for medical care while on leave or absent without leave can not be allowed. Time lost by illness, if exceeding two weeks in any one year, must be made up.

Examinations.—Examinations, both practical and theoretical, will be held at the completion of the preliminary term, at the end of each course of lectures, and at the completion of each year. The passing of the examination combined with the general records—which includes practical work, conduct, and general class-work—will determine the advancement of the student into a higher class.

The decision as to the propriety of retaining the student in the school upon the completion of the probationary period will be made by the dean upon the recommendation of the director under whom the student has taken the course. The connection between the student and the school may be severed by either side at any time during the period of training if so desired. Students who have of their own volition severed their connections with the school will not be reinstated, unless the reasons submitted at the time of their withdrawal be considered adequate. Discipline shall accord with that governing the members of the Army-Nurse Corps.

Graduation.—Candidates for graduation must have completed the prescribed course of three years—or such period as may be necessary to supplement the credits allowed—and passed their final examination.

Upon the completion of the course, the students will become members of the regular Army-Nurse Corps in the order of the vacancies, or, should there be no vacancies, they would be placed on the list for appointment as vacancies occur.

They will be eligible for registration in any state, except that those students to whom credit for collegiate or technical work shall have been given will not be eligible for registration in those states requiring the full three-years' course in a hospital. They will also be eligible for membership in the American Nurses' Association, the National Organization for Public Health Nursing, enrollment in the nursing service of the American Red Cross, and for advanced courses in the

teaching, administrative, and public-health nursing fields.

All communications should be addressed to the Army School of Nursing, in care of the Surgeon-General's Office, Washington, D. C.

Applications through the division directors of the Bureau of Nursing of the American Red Cross should be sent to one of the following addresses: New England Division, 755 Boylston Street, Boston, Mass.; Atlantic Division, 44 East 23rd Street, New York City; Pennsylvania Division, 1601 Walnut Street, Philadelphia, Pa.; Potomac Division, 930 16th Street, N. W., Washington, D. C.; Southern Division, 424 Healy Building, Atlanta, Ga.; Lake Division, 929 Garfield Building, Cleveland, Ohio; Gulf Division, Post Office Building, New Orleans, La.; Northern Division, 202 Essex Building, Minneapolis, Minn.; Central Division, 180 N. Wabash Avenue, Chicago, Ill.; Southwestern Division, 1617 Ry. Exchange, St. Louis, Mo.; Mountain Division, 14th and Welton Streets, Denver, Colo.; Northwestern Division, White Building, Seattle, Wash.; Pacific Division, 942 Market Street, San Francisco, Cal.

Synopsis of the Course of Study.—The program of instruction is based upon the standard curriculum for schools of nursing, as issued by the National League of Nursing Education in 1918.

The time allotted to the various subjects will be divided between lectures and demonstrations by members of the medical staff or special lecturers; and classes, quizzes and laboratory-work will be conducted under qualified nurses and other instructors.

The courses included in the preliminary course will be: Anatomy and physiology, applied chemistry, bacteriology, personal hygiene, hospital housekeeping, nutrition and cookery, drugs and solutions, elementary nursing principles and methods, bandaging, historical, ethical, and social basis of nursing.

The subjects following the preliminary course will include: Materia medica and therapeutics, diet in disease, massage, surgery, orthopedics, diseases of the eye, ear, nose, and throat, operating-room technic, general medicine, communicable diseases, occupational, venereal, and skin diseases, nervous and mental diseases, diseases of

infants and children, gynecology, obstetrics.

Public-health nursing, social service, and other subjects relating to the problems of the several fields of nursing and modern social conditions will be taken up in the third year.

THE CZECHO-SLOVAK ARMY IN SIBERIA

The average American wonders how an army of 100,000 men could achieve such deeds as are being reported about the activities of Czecho-Slovaks in Siberia. We must bear in mind that the Russian Czecho-Slovaks are all Slavs and that the Teuton is an ancient and common enemy of each of them. The Czecho-Slovaks interned in Russia mostly come from the oppressed Slav nations of Austria-Hungary and were forced to fight against Russia and their own interest with machine-guns at their backs. Notwithstanding this, they voluntarily surrendered to the Russians on the eastern battlefields, and since then have more or less mingled with the Russian people during the period of this war. They acquire the knowledge of the Russian conditions and psychology much more readily than either the Latins or the Teutons. So, likewise, the Russians as to them.

After the Brest-Litovsk treaty with Germany, the prisoners of war were freed, and then the Czecho-Slovaks determined to fight for the freedom of humanity with the Allies on the battlefields of France. Representations were made to the Bolshevik government that this would facilitate the transportation of these men to Vladivostok, from whence they were to proceed to France. When, however, the Germans in Russia realized that the Czecho-Slovaks would make a fine addition to the Allied armies, they brought pressure to bear upon the Bolshevik government to disarm the Czecho-Slovak, and an order was issued for them to do so; but, when the Czecho-Slovaks saw that this order would be enforced, they proceeded to use their arms, and with success. Transportation in Siberia is poor, at best. They, however, fancied that they were being retarded on their way, so, proceeded to get control of the railroad. Being familiar with the Teutonic methods, they quickly saw that German peace with Russia was, in reality, an armed invasion of a defenseless country. They then set to work to inform

the trusting Russians of the German menace and quickly gained the cooperation of the native Russian population. As some of the best scholars and finest minds are to be found in this army, they succeeded where every other nationality would have failed because of its inability to make their cause known intelligently to the Russian peasantry, owing to their being familiar with the language and conditions of the natives.

It is to be hoped that the Allies will, in time, recognize what a wonderful service these 100,000 Czecho-Slovaks could render in the construction-work within Russia, by assisting in the organization of various groups in the industrial, commercial, economic, and educational fields, and thereby rendering spiritual and material assistance to Russia, themselves, the Allies, and civilization.

Therefore, in the appointment of various commissions, it is very important to send only such men and women as can make themselves readily understood by the Russian people, not only being able to speak the language, but, also, to enter readily into the psychology of the Russian people, whether it be the ignorant muzhik or the professor of philosophy. If this can not be done, then all commissions are worthless. It also must be borne in mind that Germany has a large Jewish element who know the Russians through and through, besides the German population that has worked for fifty years into the hands of the German government, infesting every department of human endeavor in Russia.

Thus, then, this Czecho-Slovak army should be recognized by Russia as well as by the Allies, as a veritable godsend.

ROSINA WISTEIN.

Cedar Rapids, Iowa.

A LETTER FROM GENEVA IN NEUTRAL SWITZERLAND

We live here now since the end of February and like it very much. We rented a house surrounded by a beautiful garden, so that the children have plenty of room for playing; still, none can run away, because there is an iron fence. We have a wonderful lot of beautiful roses in bloom just now. We planted only tomatoes and beans, but, there are a lot of strawberries, raspberries, gooseberries, and currants, also plums, greengages, and cherries; these all full of fruit. Of apples and pears, there

won't be any this year all over Switzerland, they say. Of peaches and apricots, there will not be many this year.

Our house is very pleasant and of the American style—nice convenient bathroom, no washstands in the bedrooms, pretty porch with glass doors and windows, practical kitchen, laundry in cellar, et cetera. Hot-water heat we have, too. The house is situated in a pretty part of the town (really outside of the town), fifteen minutes' car-ride from the office, away from the dusty main road. We pay for the whole thing, completely furnished, with linen, silverware, and dishes, all garden-utensils, et cetera, only 200 francs, or \$40, per month.

I am surprised to learn that you also are having substitutes for all kinds of food. I thought only we, in Europe, had to be bothered with that kind of thing. It is not only the thinking out of decent menus which takes such a lot of time, but, that one has to go and get every last thing oneself. No store delivers any more. My maid used to stand in line for hours to get a little milk, but, since the first of June, we have cards and now things are regulated and we get every day 3 l-2 liter. As soon as there are cards for a certain thing, it is much easier to obtain.

Last Saturday, there was one cheese-seller on the market with one whole Swiss cheese [in Switzerland!], and a couple of hundred people were standing in line. The cheese was gone in less than no time, of course, and those coming last went away with their cheese-cards instead of the piece of cheese. Happily, there are potatoes now, new ones. One franc (20 cents) a pound, which is just enough for one dinner. We eat them as if they were the greatest delicacy, because for two months we had not seen any. When the last old ones were to be had, policemen had to stand and keep the crowd from storming the school-house where they were being given out against cards. But, I think that, in spite of all, it is wonderful how much we still have and that we never yet went hungry from the table, although we should like to have something real good to eat for a change.

One thing is fine for us: to have so many babies. For them, against certain cards and with some red tape, I can obtain cornmush, oatmeal, cream of wheat, and white flour; also, a little barley- and oat-flower, which otherwise one could not get. We also are

glad that we need not worry for money. As long as one has the cash to buy a quantity of something whenever opportunity comes, it is well to do so. That's what the big hotels do.

I do not think there is any peace in sight for a long time. In case times should get worse, I preserved 20 dozen eggs in silicate. Julius and I went half an hour with the car to the French frontier to get them. One peasant there has the frontier cross his property. His house is in Switzerland, but, his fields are in France. Last year, he could not reap his harvest of potatoes and wine, because nothing can be exported from France. Sometimes the frontier closes very suddenly, and one has to be careful not to be caught in his garden, for, he could not return to his own house over the line. This seems exaggerated and ridiculous, but, it is true. The street-cars here always know when the frontier is open. You can imagine what a fuss and change this war makes here, where the two countries always used to be like one.

On the whole, we are very happy here. The people next door adopted a little Belgian girl of Alice's age, and they are always playing together. Alice and Marcella speak French very well. We are speaking English now, so, they get that again. Alice has forgotten it partly.

Julius' work is very encouraging. We have large plans, for the future, concerning Russia, which country probably will be our field of activity. It depends, of course, upon the developments there, but, we are quite sure the door will be opened in due time.

[The above is excerpted from a letter written by a niece of one of the editors, whose husband has been engaged in war-relief work for over two years. Both of them are graduates of American colleges and are good Americans—all the more reason, for them, to devote themselves to the relief of the harm wrought by the war. This description of life in neutral Switzerland, we are sure, will prove of interest to many of our readers.—Ed.]

AN ILLINOIS COURSE FOR COMMUNITY NURSES

From *Public Health Reports* for July 5, we excerpt the following information that may be of more general interest.

The Illinois State Departments of Public Health and Public Welfare, in cooperation with the Illinois Tuberculosis Association and other state and local health- and welfare-agencies, has arranged a supplementary training course for public-health nurses.

The course is open to graduate registered nurses from any state and likewise to social workers and others who have been engaged in welfare work and can show their fitness or adaptability. Applicants must agree to engage in public-service nursing in Illinois upon the completion of the course. They must be in good health and not less than 23 years of age. The class is limited to 15 members. There are no fees or charges, but, the nurse must defray her traveling- and living-expenses while in training.

The course, covering a period of about ten weeks, consists of didactic work and field work under supervision in various small communities in Illinois where efficient public-health service nursing is being carried out.

The general schedule is as follows: (1) Field work in small communities, three weeks. (2) Didactic instruction at Springfield, two weeks. (3) An inspection trip to the Lincoln state farm and colony for the feeble-minded, one day. (4) Personally conducted visit to the state school for the blind, the school for the deaf and dumb, and the hospital for the insane at Jacksonville, three days. (5) Field work in smaller communities, three weeks. (6) General review, covering a period of one week at Springfield, with visits to public-health laboratories, jails, juvenile courts, child-welfare stations, sanatoria, et cetera.

RED CROSS DIRECTORS AT CAMP

In a recent bulletin, the Chamber of Commerce of the United States of America, Riggs Building, Washington, D. C., announces that the American Red Cross needs men of energy, discretion, and business experience to perform service on behalf of the Red Cross at military camps and base hospitals.

These representatives of the Red Cross have important duties to perform in assisting enlisted men in connection with their family affairs, in rendering relief of every kind, and in distributing supplies such as



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Rest-Hour in the Nursery at Woolwich. The Babies' Mothers Are Working in the Munition Plant.

sweaters, wool helmets, et cetera. They are to wear the regulation uniform of the Red Cross, with its insignia. The representative in charge at a camp must be a volunteer, although all expenses incurred in connection with the service are paid by the Red Cross. The assistant to the representative at a camp may be paid a small salary in addition to his expenses, but, acceptance of a position will involve a pecuniary sacrifice for any man who is qualified.

All persons who are interested in the opportunity for service during the war which is afforded in this connection should write for complete information, blanks for application, et cetera, to Bureau of Camp Service, American Red Cross, National Headquarters, Washington, D. C.

EXECUTIVE ORDER PLACING PUBLIC-HEALTH ACTIVITIES UNDER ONE CONTROL

Whereas, in order to avoid confusion in politics, duplication of effort, and to bring about more effective results, unity of control in the administration of the public-health activities of the federal government

is, obviously, essential and has been so recognized by acts of congress creating in the treasury department a public-health service, and specially authorizing such service, "to study the diseases of man and the conditions influencing the propagation and spread thereof" and "to cooperate with and aid state and municipal boards of health":

Now, therefore, I, Woodrow Wilson, President of the United States, by virtue of the authority vested in me as chief executive, and by the act "authorizing the President to coordinate or consolidate executive bureaus, agencies, and offices, and for other purposes, in the interest of economy and the more efficient concentration of the Government," approved May 20, 1918, do hereby order that all sanitary or public-health activities carried on by any executive bureau, agency or office especially created for or concerned in the prosecution of the existing war, shall be exercised under the supervision and control of the secretary of the treasury.

This order shall not be construed as affecting the jurisdiction exercised under



Women and girls
doing rough work in a
British naval yard

authority of existing law by the Surgeon-General of the Army, the Surgeon-General of the Navy, and the Provost Marshal General in the performance of health-functions which are military in character, as distinguished from civil public-health duties, or as prohibiting investigations by the Bureau of Labor Statistics of vocational diseases, shop-sanitation, and hygiene.

(Signed) WOODROW WILSON.

The White House, July 1, 1918.

PLAN FOR A SMALL HOSPITAL

Could you furnish me with information regarding plans, cost of upkeep, and other pertinent data about a small cottage-hospital, say, of seven to ten beds, operating-room, sterilizer, and other modern fundamentals? Perhaps some of the brethren who have had experience in hospital construction and upkeep could lend a helping hand in imparting the information I desire.

S. S. SLAUENWHITE.

Rose Bay, N. S.

[In *CLINICAL MEDICINE* for 1914, page 442, a short article was published, with

plans for a small hospital having two 6-patient wards, one 2-patient ward, and two other rooms that may be used for additional patients. Concerning a portable hospital, we were able to print a communication from Dr. John A. Hornsby, editor of *The Modern Hospital*, in *CLINICAL MEDICINE* for 1916, page 362. Doctor Hornsby also published a small volume containing a series of eight papers on "The Small Community Hospital," which gives much information concerning a 25-bed institution to cost from \$25,000 to \$35,000. A large volume entitled "The Modern Hospital" was published by Doctor Hornsby in association with Doctor Schmidt.—Ed.]

DEATH OF DOCTOR SHOLL

Dr. E. H. Sholl, late of Birmingham, Alabama, died recently at the advanced age of 86 while on a visit to his son in New Orleans.

Doctor Sholl was the oldest alumnus of Princeton University from the college of which he graduated in 1852. He then studied and later practiced medicine in Philadelphia and served as a surgeon through



What Would You Call the Lady Lumber Jacks—Lumber Jills?

the Civil War. He had lived in Birmingham for the last 35 years, where he and Mrs. Sholl celebrated their golden anniversary two years ago. Doctor Sholl used to be a frequent contributor to the pages of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* and we have been missing of late his well-considered advice and kindly counsel. To his family, the editors extend their sympathy.

A BILL TO PROVIDE A PHARMACEUTICAL CORPS IN THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY.

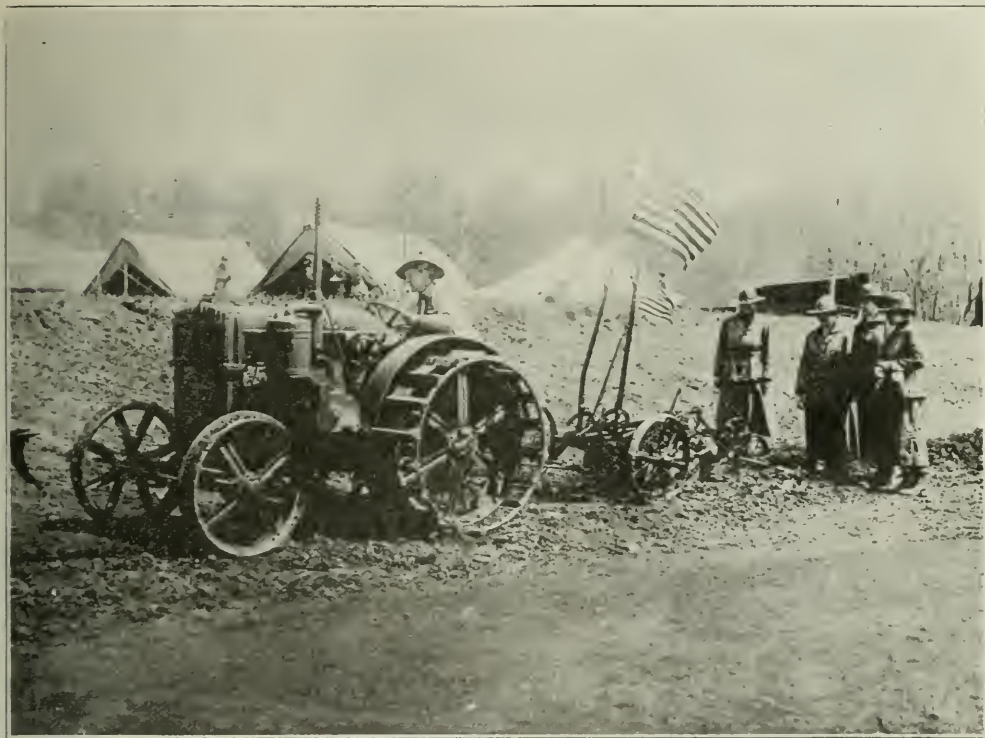
There is now before the House of Representatives a bill, known as the Edmonds Bill (H. R. 5531), for the following purpose: "To increase the efficiency of the medical department of the United States Army, to provide a pharmaceutical corps in that department, and to improve the status and efficiency of the pharmacists in the Army."

Physicians always have relied so much upon the assistance of pharmacists in the procuring and preparing of remedial agents

that it comes as a surprise that the United States Army is not provided in its medical department with a regularly recognized pharmaceutical corps. It hardly seems necessary to point out the advisability of creating such a corps, and the Edmonds Bill deserves the cordial support of the public, especially of medical men, because of the benefits that undoubtedly will accrue, through its becoming a law, to those men of the Army who require medical attention.

Almost every prominent nation in the world has recognized the service which a pharmaceutical corps can render in the Army, and even in our own service, the Marine Corps, which is doing such splendid service in France, includes, under the name of Hospital Corps, a group of trained pharmacists that are rendering splendid service and proving the effectiveness of such an organization.

The hospital corpsmen of the marines and of the Navy are doing the type of work which it is proposed to turn over to a pharmaceutical corps in the Army. These men, especially when attached to the marines, have charge of the medical supplies, look after much of the sanitary work about the



Learning to Use Tractors, at the National Service School, Inc., of the Women's Naval Service, Inc.

camp, see to it that the food and water supplies are adequate and of the proper quality, dispense medicines, act as superintendents of small hospitals, do clinical analysis and bacteriologic work, do the "paper work," and, in fact, become an all-around aid to the medical officers. Such men are specially trained for this class of work, and this is exactly what it is proposed that the pharmaceutical corps of the Army shall do.

If graduate pharmacists, who already have the foundation work in the medical sciences, are given the special training in army-schools, they will rapidly qualify for positions in the proposed pharmaceutical corps and thus relieve the dearth of medical officers in our rapidly expanding army; they will prove of incalculable service to the medical department on account of their special training.

Just as we asked for the support of our pharmacist friends in promoting the passage of bills improving the standard of medical officers in the army, so now we want to exhort physicians to urge, through their congressmen and senators, the good features of this bill and to help create a

feeling in its favor by writing to their representatives in Washington.

A PLEDGE BY PHARMACISTS

We have read with interest and with pride a fine patriotic article, entitled "Loyalty to the Country and to Pharmacy," contributed by Prof. E. G. Eberle to the July number of *The American Journal of Pharmacy*. The following is taken from this article:

"To respect my country, my profession, and myself.

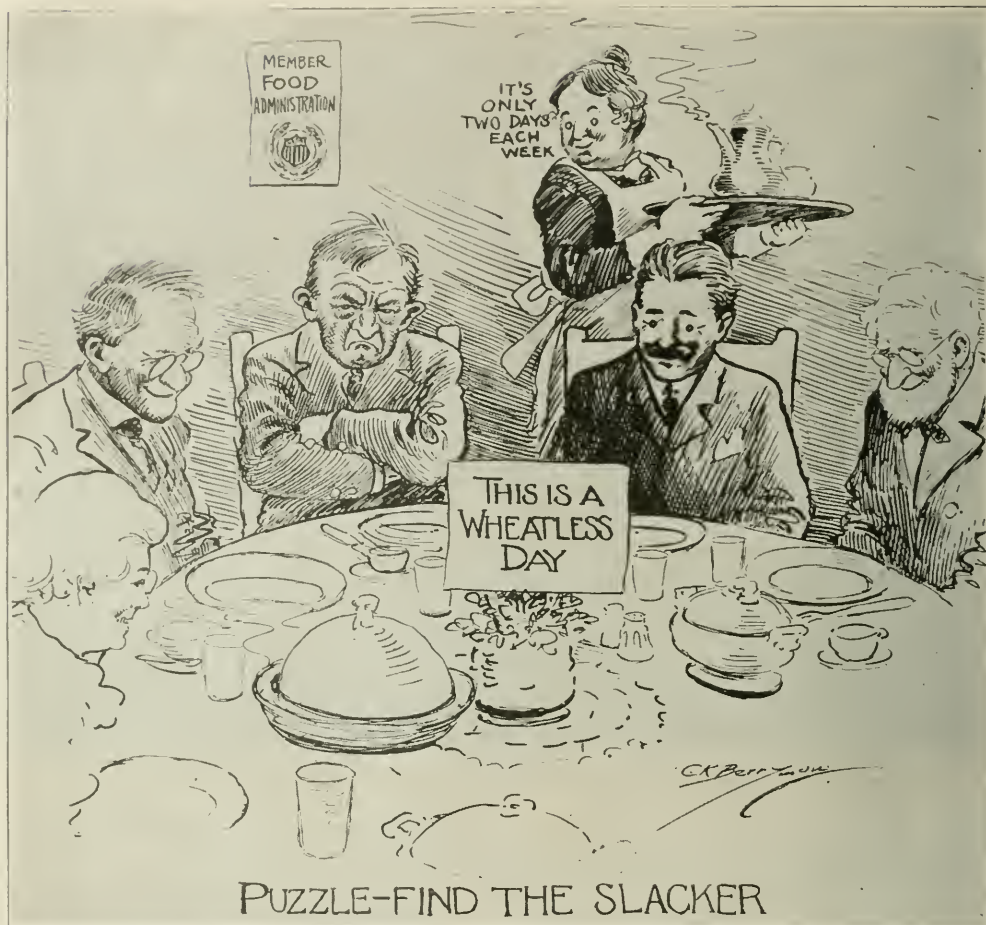
"To be a loyal citizen, to speak of my country with praise, and act always as a trustworthy custodian of its good name.

"To be devoted to the cause of pharmacy, to lend my best efforts to its uplift and advancement.

"To promote association work and thereby improve the service of pharmacy.

"To be a pharmacist deserving of respect and confidence of those whom I serve.

"To look upon service in and for pharmacy as an opportunity to be seized with joy and made the most of, and not as a painful drudgery to be reluctantly endured.



"To believe in pharmacy heart and soul, to be optimistic relative to its mission and convey assurance of its importance to those who are served thereby."

We like the spirit of this statement. It is one that might well be emulated by every other trade and every other profession in our country. Service to the nation in this great crisis involves, not only service to the individual, but, the service of every organization, every industry, every trade, through collectivity of thought. Men should use their occupations in which they are interested to help advance the great cause which at the present time is nearest to our hearts.

There are some few occupations in this country that well might be dispensed with—we could get along without the saloon, for instance. Still, after all, the number of occupations that really are vital is very great. Certainly, pharmacy is. We need

it. The problem is, to direct it into channels where it can do the most good.

We congratulate Professor Eberle upon this pledge, which, we are sure, will be taken to heart by thousands of pharmacists.

LOCATIONS FOR PHYSICIANS

A few months ago, we invited physicians looking for locations to correspond with us, because we occasionally would hear of good openings and other opportunities for physicians who might desire to change their field of practice.

At the present time, when so many medical men are in army service, it must happen, indeed, has happened, to our knowledge, that villages or towns are left without adequate medical attendance. Unfortunately, our hopes have not been realized, in so far as we have not received sufficient information from men entering the service

and giving up their place of residence that we could assist those men who wish to find new fields of work.

We should be very glad to be of service in this respect to everybody, by way of conducting a sort of exchange. In order to be able to do this, however, it is necessary that physicians leaving their fields of practice or persons knowing of good locations that are open do inform us, so that we can then attempt to supply localities in need of a physician with medical attendants and at the same time aid physicians looking for new locations to find favorable openings. Won't you help us in this—everybody?



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Girl Students at the New York State Agricultural School.

ENROLLMENT OF PHYSICIANS IN THE M. R. C.

On August 8, the following statement was authorized by the War Department, signed by Newton D. Baker, Secretary of War:

"The War Department today has suspended further volunteering and the receipt of candidates for officers' training camps from civil life. This suspension will remain in force until the legislation now pending before the Congress with regard to draft ages is disposed of and suitable regulations drawn up to cover the operation of the selective system under the new law."

Fearing that this order might be misinterpreted by doctors who would not distinguish between enlistment as a private soldier and enrollment as an officer in the Medical Reserve Corps, on August 9, I asked the Secretary of War to issue a statement making clear this point and prevent misunderstanding.

In response to this request on August 10, the following statement was authorized

by the War and Navy Departments:

"Orders issued by the War and Navy Departments, on August 8, suspending further volunteering and the receipt of candidates for officers' training camps from civil life do not apply to the enrollment of physicians in the Medical Reserve Corps of the Army and the Reserve Force of the Navy. It is the desire of both departments that the enrollment of physicians should continue as actively as before so that the needs of both services may be effectively met.

(Signed) Josephus Daniels.

Secretary of the Navy.

(Signed) Newton D. Baker.

Secretary of War.

It is desirable that the definite attention of the medical profession be called to this interpretation in order that enrollment for the Medical Reserve Corps of the Army and the Reserve Force of the Navy which is going on so rapidly at the present time, shall not be interrupted.

FRANKLIN H. MARTIN,
Chairman, General Medical Board.

[The needs of the Medical Reserve Corps for many more medical officers will not be filled for some time to come, and it is confidently expected that it will not be necessary to draft the physicians of the United States for this service, but, that sufficient numbers will volunteer.—Ed.]

THE UNITED STATES STUDENT NURSE RESERVE

It is established that the army alone will require 25,000 graduate nurses by January 1, 1919. Already 13,000 of this number have been withdrawn from civilian practice for service in military and naval hospitals, and the Red Cross has just called for 12,000 additional nurses. It is an imperative necessity that every graduate nurse not needed at home should enter military service. Graduate nurses can only be released by the recruiting of student nurses to take their place. Therefore, the prosecution of the war demands that every training school be filled to its full teaching and housing capacity by student nurses.

To comply with this demand, a drive to secure an enrollment of 25,000 women in the United States Student Nurses' Reserve was undertaken last month by the Woman's Committee, Council of National Defense. Recruiting stations were established and maintained by the state and local chairman of the Women's Committee and efforts

made to appeal to every physically fit woman with the proper educational qualifications and between the ages of twenty-one and thirty-five, to enter this Reserve.

Enrollment in the Student Nurses' Reserve means that the candidate will hold herself ready, until April 1, 1919, to take training when she is offered assignment in a training school, unless she has in the meantime entered other government service. Women may engage to accept assignments in civilian nurses' training schools or they may become candidates for the Army Nursing Schools recently established by the authority of the Surgeon General with branch schools in selected military hospitals, or they may declare their willingness to accept assignment wherever they are sent without any restrictions as to location or type of service.

The term of training is three years, although credit is given for previous technical training which may, in some schools, reduce the course to two years. No one is assigned to any school whose conditions of training will not be approved by the State Board of Examiners.

The Committee on Nursing of the Council of National Defense will be responsible for calling candidates to the civilian hospitals, and the Surgeon General's Office will call the candidates for the Army School of Nursing. Those registering for both schools will be placed on both lists and called when the need arises.

EMILY NEWELL BLAIR.

News Department, Woman's Committee.
Washington, D. C.

CHILD-WELFARE

The conditions faced during the earlier centuries of American settlement especially favored the development of the pioneer-virtues. When men have nobody but themselves upon whom to depend, they become self-dependent. Whenever a man is his own soldier, he "springs to arms," not "over night," but, at the instant the emergency arises. Necessarily, he becomes a bit of a jurist, a doctor, and of every other profession and trade found to be essential or desirable. As a doctor, he, naturally, is a herbalist and it is here that we find a reason for the Americans' partiality for vegetable remedies. Next, men's qualifications differing, they begin to specialize, and, so, we come upon the origin of the custom of

ascribing to various individuals titles not granted by authorities—"Majors," "Judges," "Doctors" soon become plentiful. We here have also the reason for the popularity of various religious sects, in which very little except a self-asserted "call" is required to usher an erstwhile undistinguished citizen into the pulpit.

The necessities of self-defense made the early American wary, enterprising, and courageous. The universal application of the legal maxim of *caveat emptor* made him the shrewdest of bargainers; while the constant infiltration of new and undeveloped material into the population, offered abundant opportunity for sharp practice at the expense of these unsuspecting subjects. From these causes, came the American business-man, with his consummate mastery of that art, and from it came also, in the eyes of his exasperated competitors, the American's reputation of being an unscrupulous dollar-chaser. The net results we see in the American of today.

These conditions already have passed away and we see before us now the adaptation of this highly developed American individuality into this new world that is taking shape among us. The business capacity of our people is being aggregated into vast combinations, just as our fighting-qualities are molding themselves into Pershing's armies. The oldtime Jeffersonian would not brook governmental interference, yet, we find it an absolute necessity in dealing with the fresh masses of citizenry that have poured in upon us by the million from every quarter of the globe. It is useless to discuss the desirability of these changes—they are inevitable whether we relish them or not.

In no direction is this new policy of governmental, or parental, direction fraught with such possibilities of benefit as in the new movement for child-welfare. If the new immigrant is cheated, he soon will learn to take care of himself. The little child, however, can not thus protect itself. That there has been, and is, an enormous waste of child-life, we have known from statistics on infant mortality. But, in another direction, we were quite unprepared for the revelation as to the influence of infantile maladies upon the wellbeing of the adult, as shown by the examination for army recruits. It is simply appalling what a vast proportion of our young men are unfit to stand up for their country in

its hour of need, and the pity is that this disability is the consequence of maladies in early childhood that could have been readily obviated by suitable treatment at that age.

In the pioneer-days, the first step was that the unfit perished. So, while cruel in the individual case, a considerable part of the efficiency of the present American is ascribable to this pitiless application of Darwin's law. The next step was, to save a large proportion of the less fit. And now we come to the third step, that of a systematized effort to remedy these conditions and restore the unfit to fitness.

With this object in view, child-welfare associations have sprung up all over the country. These are being rapidly extended and brought into such organizations as admit of united effort. It is a work in which every intelligent, altruistic citizen is profoundly interested. Necessarily, the larger part of the work must fall upon women—which is a mighty good thing, inasmuch as they are peculiarly well fitted to appreciate its importance and to apply the remedies in the most practical manner.

At the outset, it is necessary that we have a distinct ideal of what we want and the best way to get it. Naturally, we go back to the days of Sparta, as the most notable example of an effort in this direction. Here, the child was taken from its parents at the earliest possible moment and handed over to the state for development. In accordance with the conditions of the time, the result was, the production of the finest soldiers in existence; but, nothing more. Sparta produced no Platos, no Pindars, no Euripides. Its modern counterpart may be seen in Germany, where this ideal is the same, and which has developed the Spartan method further than any now existent community.

The democracies, however, are working along a different line. The natural guardians of the child are its parents, so, instead of relieving the father and the mother of the care of the child, we should seek to render them better qualified to fulfill it.

The initiation of this movement we owe to Switzerland. True, Germany developed the idea, originating the name "kindergarten," in which Froebel (1782-1852) extended the scope of the plan which Pestalozzi (1746-1827) had followed. But, the fact remains that Switzerland introduced

and developed the first, and most important, steps in the line of studying the needs of the little child.

We have just been perusing a governmental report on child conditions in Johnstown, Pennsylvania, as shown by an analysis of statistics on the first year of infant-life. The hygienic conditions were such as to make it hard to realize how any infants born under them manage to survive. The fact, that the vast majority of deaths occurs among the least-developed classes of immigrants, arouses the thought that six months or a year of tuition, or at least of supervision, would be a good preliminary to admission to the privileges extended to this class. Developing our ideal further, we should find it still more amply fulfilled by placing these people under the sanitary and medical supervision of physicians of their own race, who could instruct them in the laws of health and guide their steps along the ways of hygiene. For, it is obvious that any considerable improvement in the reduction of infant mortality must start with the parents. The three great factors—alcoholism, syphilis, and tuberculosis—must be considered, as well as the foundation on which they and the whole superstructure of evil rests, and this basis is, ignorance. The financial resources of these people will be vastly increased by this training, and then we may take up the problems that present themselves more directly. These may be found in the care of the prospective mother during pregnancy; then her care during childbirth, and, after this, her care and instruction during the earlier years of the child's life until it is time for the latter to enter the kindergarten.

To accomplish these objects, effectively, can be done only by the government or, at least, by a method centralized, controlled, and systematized by the government. The immigrant submits to such regulation, when he would resent amateur or volunteer intervention in his affairs as officious. The economic benefits would be so great and so immediate that the expense need scarcely be considered; but, the work must be done by specialists, that is, by special paid, full-time officials.

The results in sight offer a most enticing picture, millennial; but, a millennium within our easy reach. The time to realize it is now, when the general awakening of the feminine world to a consciousness of the utilization of its dormant energies sup-

plies us with the personnel, and the revelations made by the war bring home the realization of our needs.

As a matter of course, the development of this program comes as a first duty to us, as physicians. Nobody else so well knows the need, nobody else is so well qualified to apply the remedy. Every physician in America should be a paid, full-time officer of the government, with a due share of this work assigned to him. He not only knows the need, but, the people know him and trust him. It is an individual duty, devolving upon each and every one of us, to take up the study of this matter and to do our utmost to bring it into practical operation.

WM. F. WAUGH,

Chicago, Ill.

[Numerous recent publications issued by the Children's Bureau, of the Department of Labor, throw a great deal of light upon the child-welfare movement, and some of them have been referred to in various editorial articles. Among other good things is the work of the Playground and Recreation Association of America, which, in connection with several other bodies, declared a "Children's Year," to last from April 1918, to April 1919. Through all these efforts, it may be confidently expected that much good will accrue. Even now, adult young Americans are found to compare well physically and mentally with their peers of other nationalities. The work of the child-welfare movement will still further emphasize our advantages and will tend to correct existing evils.—Ed.]

A TIMELY AND IMPORTANT DECLARATION TO THE MEDICAL PROFESSION

Founded in New York City in 1867, the house of Schering and Glatz has been, from its very inception and throughout its existence, an American concern, entirely free and independent of foreign control, financial or otherwise.

The relation of Schering & Glatz to the German-owned *Chemische Fabrik auf Actien* (vorm. E. Schering) has always been that of an outright buyer of that Company's products, with the sole privilege of marketing them in the United States.

The German concern has never had a

dollar's worth of investment in Schering & Glatz nor have Schering & Glatz ever owned stock in the German concern, either as a firm or as individuals.

The "Schering" in Schering & Glatz stands for the name of the founder, Mr. Hugo Schering, a distant relative of the Berlin family. He and the original partner, Mr. Glatz, both American citizens, have been dead for many years.

Schering & Glatz's leading chemical and pharmaceutical products, so long identified by the brand-name of "S & G.", are now manufactured in the U. S. A., either by themselves or under their direct supervision and control. Others, as yet unavailable, will be added as fast as prevailing conditions permit.

Schering & Glatz, Inc., guarantee for all of these products a standard of quality fully the equal of those formerly imported.

In prescribing "S. & G." products, the physician will henceforth have the double satisfaction of applying therapeutic agents that he has known and relied upon for many years, while feeling assured that he is using the American-made products of a wholly American concern.

SCHERING & GLATZ.

New York City.

[We are printing the preceding "timely and important declaration" in the reading-columns of *CLINICAL MEDICINE*, instead of in the advertising columns, as is ordinarily our custom, because of its peculiar importance at the present time. The firm of Schering & Glatz is doing the right thing. It is quite proper that it should place itself right with the American people at this time. Those concerns which are purely and whole-heartedly loyal deserve our support; those which are only half-heartedly American, and which were German before the war, whether on account of close commercial affiliations or because they were actual branches of German houses, must be looked upon with suspicion.

We are fighting a great war in Europe, to rid the world of the most despotic power that man has ever known. We can not forget that the money Germany is using in its desperate effort to subjugate the rest of mankind, our own country included, has been drawn largely from us. By contributing to the prosperity of German houses in this

country, which after the war will remain German, we are contributing right now to the German war-chest. One of our Chicago newspapers recently printed what seems to be an authentic document relative to the production of poisonous gases used in the present war, in which it was stated that a German chemical house, which manufactures medicinal products that before the war were sold all over the world, is now making 20,000 gas bombs daily; while the American house of the same name, which has established a factory in this country, is supplying the United States Army and the American people right now with thousands of pounds of a well-known medicinal chemical.

By her peculiar methods of competition, Germany has succeeded again and again in crushing competition and thereby keeping the markets to herself, to be exploited at her own price and on her own terms. Professor Goode, of the University of Chicago, in one of his lectures, has shown that German industrial combinations are



Women Stand Behind the Men: Both Are Fighting.

able in peace times, through state support, to destroy competitive industry by the expedient of selling below cost in one country and at exorbitant prices elsewhere. There is more than a suspicion that German houses in America right now, in the midst of this war, are endeavoring to control the chemical industry by the same method. There have been some important revelations uncovered by the alien-enemy custodian, as a result of which several of these houses have already been taken over by the government.

Americans should be on guard. They

should know that the houses with which they deal are completely free from enemy-alien affiliations of this character.

Again we say, we are glad that Schering & Glatz have come out into the open with this statement. It is to be hoped that other



The New Farm Machinery Makes It Possible for Women to Work on the Farm.

concerns which prior to the war have served as agencies for German pharmaceutical and chemical manufacturers will come to the front with equally frank statements—if they are able to do so.—Ep.]

A CORRECTION

In Dr. C. S. Cope's article, in the August issue of *CLINICAL MEDICINE*, two mistakes slipped by us that call for correction. Our readers will have noticed that Ian MacLaren's Dr. Weelum MacLure was dubbed MacLean. This, of course, is an error that should not have happened. Unfortunately, our copy of "Beside the Bonnie Briar Bush" was not on hand, having been loaned out, and the point could not be settled.

On page 617, column 1, line 2, "emetic cases" should read, of course, "enteric cases." Please enter that correction.

WAR ECONOMIES—THEN AND NOW, NOW AND THEN

Verily, the philosopher who promulgated the theory that there is nothing new under the sun had a deep and abiding insight into the conditions under which we poor mortals live and move and have our being! For, disguise it as we may, life is just a continuous whirligig the bars of which speed on under our propelling feet. But,

we are so optimistic—and so dense, so obtuse, that we are ready to drop into the grave before we realize that, no matter how they are camouflaged or how they vary from day to day, these bars are the same old limitations through which the race has been peeping ever since time began.

We strain our minds to be original, we attempt to endow ourselves with new at-

West families ate wheat-bread fifty-five years ago or had sugar in abundance?

Who knows how many of the delicious recipes, handed down to us from Civil-War days, had their inception in food regulation?

Who can tell how farreaching will be the effect upon our tables and our stomachs, upon our children and our children's children, of our presentday restrictions on what we eat and, more especially, on what we are not permitted to waste?

Those who will first view the world after its temperature drops to normal again and who can have only a dim idea of the hardships of today will, probably, elevate their brows at the victory bread we old people have learned to love and will dilate delicate nostrils at the honey cookies and molasses cakes to which, from force of habit, we still cling; and they and their children will slip easily into ways that do not tend to the conservation of meats and fats and sugar or to the extraction of the last mythical calorie from those essentials.

But, to us, who are bearing the stress and strain of these historic days, who are



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The Woman Letter Carrier Has Arrived.

tributes, in order to meet conditions that are strange to our unaccustomed eyes, we fancy we are evolving something entirely unheard-of; only to learn, eventually, that we are doing in our way what other generations did do in theirs, and that our most thrilling experiences duplicate those of the selfsame ancestors before us.

Ask any woman who remembers anything of the years following the Civil War and see whether she finds anything new in the economies or the prices of today.

Many a good mother has been accused (silently and respectfully, perhaps), by her children, of niggardliness, of needless thrift and pinching economy, when, in fact, it was the echo of the enforced rules of the bitter wardays!

How many New England or Middle-



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Girl Subway Guard.

pinching the pennies and making the children eat the crust on the bread, the struggles and economies of those who have finished their work and gone on take on a new significance and a new sanctity.

Even as we are helping to win the war with our conservation of food, so they who preceded us helped to make the world and this United States a soft and comfortable cradle in which the world's greatest democracy might be nourished and developed.

Even as we have sniffed at the skimping and the scanting which we dimly—and

none too pleasantly—remember, so will those who follow us misunderstand and censure. But, what will it matter if they do? For them, the cradle will be softly pillowed and perhaps they will wake to a warless world—which would, indeed, be something new under the sun!

EMMA TOLMAN EAST.

Chicago, Ill.

THE NURSING CRISIS

In discussing the efforts to satisfy the nursing requirements of the war, Dr. S. S. Goldwater of the General Medical Board, Council of National Defense, writing in *The Trained Nurse* for July, refers to the fact that the country can not spare the number of graduate nurses that the army requires, nor can the training schools produce new graduates in sufficient numbers to satisfy the needs both of the military and the civil population. There is at present a serious derth of nurses, the graduates of training schools being hopelessly inadequate in numbers to satisfy the demands made. In consequence, many physicians and patients have had to be content with such "practical" nurses as may be

for whom a less complicated and less prolonged course of training might be sufficient. In agreement with this opinion, Doctor Goldwater proposes what appears to him to be the safest and best way out of the difficulty—in fact the only way out;



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Say, But She Must Be a Good Fellow!



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First Women Railroaders in America.

available, and, sometimes, to the detriment of the sick. Yet, it must be insisted upon that many of these same practical nurses are conscientious and careful workers, eager and anxious to obey the orders of their physicians to the letter and to be of actual service.

There must be many young women who could be trained in comparatively short periods of time sufficiently to render valuable service in the present emergency, and

namely, the training of a large number of nonprofessional voluntary war nursing aids enlisted for the period of the war only and composed of a class that will not take up nursing professionally under any circumstances but is willing to give gratuitous hospital service during the emergency.

While this suggestion would provide for the needs of military hospitals, something similar might be undertaken for the purpose of supplying the requirements of the civil population. For the former, a standard course of training for nursing aids or nurses' assistants has been devised by a group of the best known and most competent training school superintendents in the country. The American Red Cross has already given part of this course, consisting of fifteen preliminary lessons, arranged to precede the practical ward work, to more than 10,000 women who have been registered at a dozen or more training cen-

ters in the larger cities. In New York City alone nearly 500 have finished the practical as well as the theoretical course, and about half of this number are now actually engaged in some form of hospital work. Two thousand other women stand ready to take up this work in New York City as soon as the hospitals are opened to them.

Among the 1,500 training schools of the country there should be no difficulty in finding 300 which are capable of training, and which can be trusted to train, twelve nursing aids or nurses' assistants per month, or say, 150 per annum. With the moral support of the army the hospitals



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American Red Cross Autos Are Driven by Women.

of the country can easily obtain and turn out 25,000 nurses' assistants before the end of the present year, or 50,000 by July 1919.

NECESSITY KNOWS NO LAW

The rapidly increasing fighting-forces of the United States Army, so familiar to every doctor who reads the lay papers, must impress him with the fact that the Medical Reserve Corps must keep pace with the expansion.

With every thousand men in the fighting-forces, there must be ten medical officers. Hence, it is a matter of simple calculation to figure the requirements of the Surgeon-General's office in the number of medical officers that must be at the command of the Surgeon-General when they are required.

With three million men in the United States Army by the end of August, this means 30,000 doctors—and there are now less than 20,000 on the active list of the Medical Reserve Corps. In addition to the number required for immediate assignment with troops, a large reserve corps should be at the command of the Surgeon-General, so that, when the necessary number is required, they will be at his disposal.

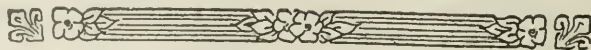
The doctor is the most favored of all professional men in the matter of his assignment. The lawyer, as an example, when drafted or when he voluntarily offers his service and is assigned to duty, gets \$30.00 a month. The lowest pay accorded a medical officer is \$2,000.00 a year, with additional pay for commutation of quarters for dependents.

It is the belief of the Surgeon-General that a sufficient number of physicians will voluntarily offer their services as medical officers, and we, therefore, must do our duty, not only to our country, but, to those who are so admirably conducting this war in which we are now engaged.

A large and well trained medical corps is absolutely essential, as 80 percent of the casualties are returned to the line through its ministrations, and it must not be recorded by history that a sufficient number of medical officers have not volunteered their services to assure proper care for the mobile forces, to attend the wounded and sick in hospitals, and to supply the Surgeon-General, whatever the demands may be.

Five thousand physicians a month for an indefinite period is the requirement, and those doctors who are of the opinion that other physicians in their immediate neighborhood are better qualified or have less responsibility than themselves should, in view of the crisis now facing us, subjugate their individual opinion and apply to their nearest examining board for a commission in the Medical Reserve Corps.

A medical reserve corps should be what its name implies: a corps of reserve physicians upon which the Surgeon-General may call; and this country today should have a reserve corps of not less than 50,000 doctors, and every physician should feel it his duty to be part of this organization.



In the World War

LETTER FROM FRANCE—II

American Army-Ambulance men continue to win distinction by their valor in the heavy fighting on the front.

The men of S. S. U. 65 have just been cited in divisional orders as follows:

"In the present hard fighting, the American personnel of S. S. U. 65 has earned, as in the past, the admiration of the officers and soldiers of the 121st division.

"Always ready to go forward voluntarily into the zones most swept by the enemy's fire, the Americans expose themselves to danger, to save and evacuate our wounded. Worthy sons of their great nation, they show the initiative and calm courage of their race.

"In the name of their French brothers in arms, the general commanding the division thanks and congratulates them."

The American Red Cross has just erected a complete tent hospital, located on a former Paris race-course. The entire equipment was put together and in working order in twenty-five days. The hospital is complete in every respect, and not merely a casual affair, as might be thought from the speed with which it was erected. It contains 600 beds and is divided into wards of twenty-five beds each. It has a steam-heated operating-room, a complete sterilizing plant, fumigating plant, bathtubs, shower-baths, kitchen, stoves for winter, and a complete electric lighting system. All the tents have windows set in the walls, to make them light and airy, and each has an air-chamber between two coverings, to keep it cool. The first day the hospital was opened, it received 150 men wounded in the last German offensive, and ever since has been proving of immense value. The entire hospital equipment can be loaded and moved rapidly on eighteen trucks, which makes it especially valuable near the front.

The offer of the joint war committees of the British Red Cross Society and the Order

of St. John, to provide in Windsor Great Park a fully equipped hospital of 500 beds for the American wounded who are to be brought to England for hospital treatment, has evoked the warmest gratitude of the American Red Cross.

The fact that the English people want to make such provisions for the care of the sick and wounded American soldiers and that such hospitality is to be extended to them will prove another means of cementing the ties of friendship and sympathy between the two peoples.

No country whose people are so thoughtful and generous as to provide such care for American soldiers and sailors can be considered a foreign land.

That the large army of America, already a part of the fighting forces of the Allies, and the much-greater mass of combatant troops coming to France will be amply supplied with every actual necessity in the way of food, munitions, and clothing, is evidenced by an inspection-tour of a large supply depot somewhere in France. This depot has been constructed in record-breaking time. But a short time ago, it was nothing more than uncultivated land. Now a large and busy city has sprung up as if by magic. While the camp is still in the state of construction and much more work is contemplated, at least thirty-five huge warehouses are now in service, rushing supplies to our forces at the front, and 155 barrack buildings alone are used to house the large force of men on duty at the depot. To view the camp from a neighboring hillside, one would receive the impression of a gigantic railroad terminal point in the United States. Over forty miles of trackage is constantly in use, and, as the demand is growing by leaps and bounds, the present mileage will soon be doubled and more.

A bakery on a huge scale, capable of an output of one million pounds of bread a day, is almost completed; so, the men in

the trenches will be assured of an uninterrupted supply of good American bread.

There are many serious complications in the making of a city of this magnitude in so short a time, and one of the greatest is the labor problem. In that regard, the camp might be compared to the Tower of Babel; for, one can see working together in



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British Women Making Aeroplane Wings.

seemingly perfect harmony the laughing Dixie Negro, the hard-working Chinese, the gesticulating Spaniard, and, last but not least, the German prisoners of war—the latter perfectly happy and contented to be freed from the clutch of their warlords.

It requires efficiency to handle such a conglomeration of the races, and efficiency is in evidence everywhere.

At such a place, well off the beaten and traveled path, the Y. M. C. A. plays an important part in the life of the men. Everything that can be done in the way of recreation, that adds so much to the fine spirits of our troops, is supplied by this organization. A large and competent force of men and women is accomplishing a work that every American in France will appreciate. Two large structures and one smaller one are in constant service, where the soldiers can read the daily papers, write letters, and

purchase everything from steam-shovels to safety-pins. The daily sales in the huts at this camp amount to from 2,000 to 4,500 francs. Some form of amusement, such as band concerts, boxing, and wrestling matches and movies, is given each evening, and religious services are held both morning and evening on Sundays. Elsie Janis is booked for the near future, shortly before her departure for America. The seating-capacity of the largest hut is 1,700, and there has been scarcely a night when it has not been filled to overflowing.

Boatloads of refugees coming down by canal from the villages along the Ourque and the Marne rivers are now adding to the refugee problem. Three canal-boats moved through Paris yesterday, carrying all that was left of the village of Lizy-sur-Ourque: some three hundred persons, with what valuables they had been able to save. Several barrels of sugar, cases of champagne, coops of fowls, a few folding beds, mattresses, and rolls of leather were piled up in the boat. Three children were drowned on the journey, they having leaped overboard in fright during the bombardment on the first part of a three-day journey to Paris. The Red Cross fed the refugees, transported them to the Saint-Surplice Seminary for the night, and took them back to their boats in the morning. These people arrived in their own boats. Other boat-loads have arrived since then, discharged their living cargo in Paris and started back for more.

A bathroom for children was opened at Saint-Surplice Seminary recently by the American Red Cross. This makes it possible to bathe the children before giving them clean clothes. Thousands of refugees have arrived in Paris with nothing but their clothes on their backs. Thousands of garments have been distributed to them by the Red Cross warehouses. One family with three children arrived at the Gare de l'Est yesterday; the parents had saved nothing, but, the children had each caught up a rabbit at the last minute. An old woman came into the same station carrying as her most precious and only remaining possessions six stout umbrellas.

While it is impossible to estimate the number of the refugees that may arrive any day or to provide fresh milk for the

children, ample food supplies are at hand at all the station canteens and the seminary, and a large quantity of condensed milk is ready for any emergency. Every refugee child arriving in Paris since the beginning of the offensive has had its fill of good rich milk.

Night and day the work goes on. Air raids mean merely interruptions. The canteen lights are put out and the refugees led to the nearest "abri"; when "berloque" sounds, the feeding and clothing and transportation continues. The occasional reports from "Bertha" (the long-range cannon) do not seem to interest the refugees. They are merely bored.

Miss Winnifred Holt, president of the Franco-American Committee for the Blind, is giving a series of lectures in the various hospitals in Paris. Miss Holt recently gave a series of lectures in America and then at the hospitals at the front, in which she told of the work done by her Committee, under the patronage of President Poincaré and President Wilson, for the men blinded in the war. The committee has founded three establishments in Paris for the re-education of the blind.

B. SHERWOOD-DUNN.

Paris, France.

EXPERIENCES OF A DOCTOR FROM CIVIL LIFE IN THE U. S. NAVY

Numerous articles have appeared in the medical journals relative to the experience of the civilian doctor going into the Army, but, I do not recall reading of the experience of one who has chosen the Navy.

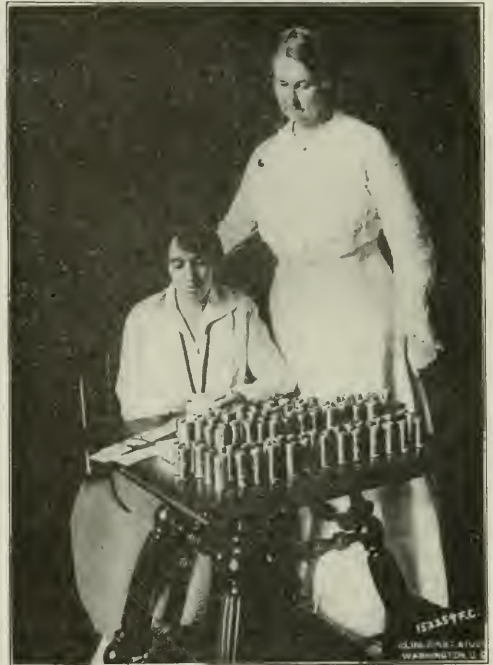
As the Surgeon-General of the Navy has recently made a request for one thousand more physicians to meet the large increase in the personnel of the Navy, it is perhaps not inappropriate that the experiences of one of those who chose this branch of the service be given.

There are many things to learn that to a landsman at first seem strange; he soon finds, however, that they are all the result of years of experience. Paper work—forms, reports, nomenclature and the like—that at first seem so much red tape that could well be done away with, are, in practice, found absolutely necessary.

The medical man in the Navy does not lose his title of Doctor and is, as a rule,

addressed as such, unless it may be in his grade. The question of grade and rank confuses many. For example, a young man, on entering the Navy, is given the rank of lieutenant, junior grade, and the grade of assistant surgeon. He will be addressed as Doctor Smith or Assistant Surgeon Smith, not as Lieutenant Smith.

The Navy medical man also soon finds that he is not confined in his practice to the sailors and their ills. The battleship of



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Fashioning Candles from Newspapers for Use in the Trenches.

today is a large industrial plant, with highly trained specialists in each department and a personnel of a thousand or more men. He must learn ship hygiene and sanitation. A big battleship, with its many compartments, furnishes a field of work very different from that of a town of equal population.

The ship's doctor also cares for the marines, and, as they very often operate ashore, the medical officer has to look after camp sanitation, keeping his field hospital in good working order and, yet, mobile,

He has also to deal with the cases peculiar to the submarine service. The fumes and close confinement are liable to cause certain respiratory and nervous conditions. To make the circuit complete, there is the

Naval Aviation Service, with its questions of rarefied air and equilibrium.

The shock of the great-gun fire is as great aboard ship as it is with the artillery regiment. The treatment of cases of exposure is as vital as it is in the trench. There could be no more heroic work than that done by the men on our destroyers in the North Sea last winter. The ships were covered with ice and the lads on lookout, covered with frozen spray, seemed to be wearing coats of mail.

All these various branches of the naval service certainly make the man coming from civil practice wonder whether he can make good without the years of experience in military drill and professional experience that the regular navy surgeon has had. One thing is certain. His respect for the service increases not less than a hundred percent.

It was my exceedingly good fortune to have my first detail at the Naval Medical School at Washington. Dr. E. R. Stitt, with the rank of Rear Admiral, is the head of the school. On the afternoon before the classes were to start officially, a few of us were at the school. Doctor Stitt received us and in a most charming manner welcomed us into the service. The next day, we were fortunate in having Surgeon-General Braisted give the class its official welcome. It was a talk that made us all feel that we were, indeed, welcome.

The course of instruction was, of course, intensive, but, never could I have believed it possible to accomplish so much in so short a time. Never have I seen work so thoroughly and efficiently demonstrated.

In the laboratories, the work was made so practical that no one could help grasp it. In the didactic lectures the essentials were presented in such a manner as to make them self-evident. The course of instruction in the duties of the medical department and ship hygiene were entirely new to the majority of us and the ones that the most of us "boned" on the hardest.

With it all, there was the utmost courtesy and patience. At no time did I see an instructor show the least impatience when asked to make some point more clear. With this, there was always the impression being made that we had dropped civilian ways and were now a portion of a military organization. Each day spent there made us feel more pleased that we had come into

the service and that in the future we could look back with a clear conscience.

Upon the completion of the course of instruction at school, I and the unit of which I am a member were honored by being given sea duty on board the U. S. Hospital Ship "Solace".

When one is acquainted with the work this ship has done, the amount of surgery and medical work done, the numbers of eminent men who have served on her staff, he will, indeed, feel that he is honored to be put on duty there.

The naval officer is an officer and a gentleman. No higher praise can be given a man than to say that he is a true gentleman; and of such we have found the staff of regular medical officers aboard this ship.

CLIFFORD E. HENRY,
Surgeon, U. S. Naval Reserve Force.

OUR BOYS IN FRANCE

We are sure that every reader of *CLINICAL MEDICINE* has been thrilled by the story of the wonderful work of our boys in France during the last few weeks. We expected great things from our Army, but, it is doing even more than we expected. Not only has it shown itself to be a fighting machine of the first quality, but, its initiative, self-confidence, courage and morale, have proved a revelation. Our boys have that quality which we fondly call "pep," and, moreover, they have the power of instilling that quality into others. There is no doubt that new life, new courage and new determination have been inspired in the Allied armies by the work of our own American soldiers and sailors.

In a letter recently received from a friend of the writer, a medical officer now serving in France, we get the following picture of the wounded: "In due time the train arrived with some of the battling marines and regular infantry that had acquitted themselves so well at the battle of Chateau Thierry. Say, it was a sight to see those brave lads. None of the spectacular for them. There were but few of them that were wounded badly. Most of them had been gassed. They were very unconcerned about it. All they wanted was something to eat and a bed. Well, we were very glad to wait on them. They wanted to know when they were going back to the front. No cold feet in this

bunch. They are all 'Raring to Go' and get the Heinies that potted them. I have talked with many of them. I received fifty-five of them in another ward next to my own ward. It does a person good to talk to them. Nothing bragging about them at all. They said it was hell up there for a while, but, they are all proud of the record that they made and are anxious to repeat it as soon as possible."

That is the spirit of young America. The war is a game, a great game, a game that must be fought fair, a game into which every man must put the best that is in him; a game in which every man fights as long as he has the power to stand up and fight. Somehow the story of the feats of Americans on the Marne and in Picardy remind us of the fight for the championship in a baseball game. Don't consider this comparison trivial. It is the sporting spirit which makes baseball such a popular game in America, and which has developed the fighting blood that eventually will carry American troops to the Rhine and beyond.

I have no doubt that every reader of this editorial has a personal interest in this war, just as we have. In the morning paper we read about some boy whom we have known since he was in knickerbockers being decorated by the King of England, or receiving the *Croix de Guerre* from the hands of a French general. Your boy is over there—your brother—your friend—and they are doing these things which we read about in the newspapers. Knowing them as we do, we feel that as a fighting unit the American Army is equal to any in the world and that any ultimate result except victory is impossible.

"THE MEDICINE-CHEST OF THE ARMY"

I have been very much interested in the little article, on page 490, entitled "The Medicine-Chest of the Army." I am glad someone has had the courage to write something on this subject and to try to impress upon some the absolute truth of the fact that the army methods as to medication are antiquated and should be relegated to the scrap-heap. In surgery and sanitation, this is not so, for, here the army methods are in the forefront. The editor seems to think that possibly "the correspondent's particular complaint may be tinctured a deeper

blue than is quite warranted by the facts"; and, also, that conditions which he describes are only local. I certainly do wish this were true, but, after being in the army for several months and having had the privilege of more than one camp and meeting men from other camps where I have not been, I am thoroughly convinced that he told the painful truth as it exists throughout the whole army.

You may imagine how a doctor feels who has been accustomed to the active principles and then must go back to the uncertain and often worthless tinctures and fluid extracts. Do you think it any encouragement to try to do your best when you know these remedies are so unreliable? The desire to "pass the buck" becomes stronger daily under such conditions. However, most of the medical men are struggling along and doing the very best they can with what they have; still, one can not but feel that the best is none too good for this noble army of our young manhood who are fighting our battles for us.

Hardly any of the doctors who are in the service are there because of the remuneration they are receiving or for the glory they will receive, but, because they feel the boys need them and they wish to serve their country in this way. The strangest part of all this is that this matter of drug medication is allowed to run along year by year, when the government is so particular about almost everything else to see to it that it is kept to the forefront and abreast of the times. Is it possible that the great mass of our army officers have been drug-nihilists? The present methods would very rapidly make them such.

Nature is surely the great healer, but, we are prone to think that it works to better advantage when given the proper help at the proper time. We are not trusting to nature entirely in dealing with typhoid fever, smallpox, and diphtheria. Tetany and gas-infection have received their share of attention. Dakin and Carrel have done wonders for the wounded. So, why can not we use the modern active principles and see the results that will follow?

— . . . —

[Naturally, your letter pleases us very much. We feel as you do, that it would be a mighty good thing if medication could be modernized and brought up to date in the

service. We understand, of course, that, in the creation of a big army on such short notice, it is necessary to standardize the remedies adopted, still, in so doing, it is a pity that the importance of the active principles was not taken into consideration. Never was this more strikingly apparent than in this present war, where bulk as well as activity must be considered. When we are struggling to build ships to carry the increasing multitude of commodities across the ocean, it would seem the part of good sense to select those items that have the advantage of small weight, slight bulk, and easy portability, in preference to those which are heavy, which deteriorate, which break readily and which take up much space, particularly if the remedy which has the advantage of lightness and economy in space is also the most effective as well as the most concentrated.

However, we do not purpose to enter into a criticism of those who are running the medical end of the war. The job is a big one and the work has been well done. We want to help in every way we possibly can—help by our encouragement, and, if we may be permitted occasionally to do so, help by our suggestions.—ED.]

TRENCH FEVER

We would sure hate to be lousy. We were once. During the Civil War a brother returned from the front on furlough. He promptly assumed citizen's clothes, and we boys as promptly appropriated all of his equipment we could utilize. Discarding our overcoats, we stuck our heads through the hole in his army blankets, and muffled therein against the winter's blasts. Some days passed, and then we were summoned from school in the middle of a session, and ordered home instantler. On the way we darkly surmised the probable cause of the summons, and concluded that someone in the immediate family had fallen dead. The case, however, proved to be far worse than anything we had imagined.

Mother conducted us to our bedroom, where we found a large sheet pinned to the floor. On this we were placed, with orders to disrobe and thoroughly examine every portion of our clothing, especially turning over the selvage seams. The net result was two, or possibly three, small

spider-like insects, which we recognized from descriptions as "graybacks". Mother had found one in our bed that morning. Hence, the summons.

The body louse has already been convicted as the agency for the transmission of typhus fever, the ship-, jail-, and camp fever of the past. This illustrates the trend of the times. From complexity we proceed to simplicity, and the crude, uncertain combinations of many crude and uncertain drugs, in the hope that some one of them may contain something useful, give place to the isolated active principles, in chemical purity and administered singly with definite purpose. Vague guessing founded on vague half-knowledge, gives place to the modern diagnostic methods of the laboratory. Mystery and hypothesis based on assumptions make way for definite conceptions of the disease as revealed by pathologic investigation. The talk of infection by "miasmas" and "fomites" is replaced by the insect-transmission of known disease germs.

A study of trench fever by English and French scientists has had a very interesting result. While not a fatal disease, this malady has resulted in a serious loss of efficiency of the army, 10 percent or more of the soldiers being disabled by it at one time. Sir David Bruce and his associates have traced the infection to the body louse, or "cootie". That the lice were carriers was shown by the fact that only those fed on febrile cases imparted the infection to the volunteers upon whom the experiments were made. The incubation period was from eight to ten days. Infection was transmitted by scarifying the skin over small areas to which then the excreta of the lice and their crushed bodies were applied.

We are warranted now in the presence of almost any infection in beginning our inquiries into the cause by ascertaining what insects could have had access to the patient and whence the insects could have acquired the elements of infection. This applies not only to all forms of lice, but to fleas, flies, chiggers, bedbugs, roaches, mosquitos, and all the other pests with which Beelzebub has tormented humanity into committing profanity. Meanwhile, we are glad to learn that a determined campaign is being instituted in the battle line against the louse.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by *GEORGE F. BUTLER, A. M., M. D.*

THINGS that have happened since the war began have shed satisfactory light on many things that had happened before, but, were understood only dimly, if at all. Of all these things, the activity of women in various forms of organized effort and individual work was, perhaps, most occult or most unnoticed. This does not refer especially to the suffrage movement nor broadly to the women most conspicuous in that movement; for, it had been fermenting since long before our civil war and was (mainly by disturbance or by eccentric comedy) making its spectacular way toward a successful outcome. The real impulse was of deeper origin, more generally diffused; and it was not much in the public eye, because it was most manifest outside the big cities—in the small towns, the third- and fourth-rate cities and the smaller places that intended to become cities.

Thus, especially throughout the country between the Alleghanies and the Rockies, the great valley of the Mississippi, beginning in the early eighteen-nineties, there appeared a fresh, vigorous civic spirit in nearly all those prosperous, comfortable towns which stand clearly as representing the majority common-sense and open-minded people of the Republic. The men in these towns and on the surrounding farms created the wealth, the solid resources by which that whole region is characterized. Their women folk had done their helping share; and, as the times grew easier and terms of living more comfortable, these women took over the job of creating cleanly conditions, ordinances of public sanitation, better schooling, better thinking, better all things appertaining to domestic well-being, leaving the men to go on with their farming and manufacturing and merchandising and what not. The women's clubs came of themselves, spontaneously, quietly, as matters of course, and went to work. There was no general promotion, no concert of action. They just came, and they

began to straighten things out and keep them straight. By 1910, there was a women's club in every place above the grade of a hamlet, and all were set alike upon the one same course of policy.

The women's clubs in big cities, being for the most part made up of women whose husbands had grown rich and who had more leisure and money than education or world knowledge, were negligible in this development; they being given over to high and hazy purposes not always understood by themselves, and furnishing easy avenues to mild but enjoyable publicity. As clubs, they are not in it. They have no part in the important influence the country organizations have exercised in our later life. These organizations, stirred by one of these general impulses in which all really great changes in the world originate, had an effect no one could have foreseen. They made ready the women of the nation for the work of a then undreamed-of war. Unconsciously and as a mass they consolidated the mothering power of our American women. Stirred by the same power and preparing all unaware for the most grim and trying ordeal ever decreed to any of earth's peoples, there came the woman physician, and no longer viewed askance by the men of her profession; came the woman skilled in dietetics; the trained nurse; the sanitarian; the laboratory-assistant; the modern, sane sociologist; all those clear-eyed, cool-headed, skilled women who were needed, primarily, in ordering the ways of peace and decency and thinking, practical uplifters, who would have been surprised to hear themselves so described, and who were shortly to be called upon to effectuate the work of armies under unimagined stress.

And there has been made clear the way for other women, less highly endowed, to come effectively into the work of saving the world, so that, when the time came, they could serve even as their men went out to

serve, could step out of the old confines of women's work, to take the place of men who must go out to fight, and so set free and keep in play the full energies of a mighty country gone to war. And they were promoted in this work by love, for to woman love is the supreme authority; for man love is subordinate to right; woman places her ideal in the perfection of love, man, in the perfection of justice.

With far less preparation, the women of Great Britain had come into the same new fields of duty. So had the women of France, and so, in less measure, had the women of Italy. But, our American women streamed across the ocean, to join those others and to learn, so that by the inevitable time when we too must take up arms our home women were prepared by example and experience to do their share as well.

This makes a great light shine through the clouds of Armageddon. Here, are the men and women of a whole race, of all those nations owning English speech in common, a bond of safety girdling the globe, with one purpose and a vast community of labor, acting in complete unison, making and maintaining war on such a scale as never before was seen. The sad thought that "men must work and women must weep" is forgotten. There is no weeping—there is work to be done.

The tired old earth never bore such another generation, ne'er saw such a spectacle. It will emerge in history the most splendid of all time, and will so be known to the last day.

To assume that woman is out of her sphere in doing the new things that she is now undertaking, is a delusive error. Such an assumption presupposes a "sphere"—accepts as a sphere the metes and bounds which traditions and conditions hitherto have fixed as delineating woman's proper activities. The fact is that the present expansion of woman's labors is biologically correct—exactly what it should be—a bursting of unwarranted fetters.

Women had, for years before the close of the nineteenth century, been supplementing the work of men in various lines, for the most part secretarial or in other light occupations. Here and there, in circumstances of which there is no reason to be proud, they had engaged in manual labor of the lower, unskilled sorts. Who

would have believed ten years ago that women could take the place of men in mechanical employments calling for manual skill? When the women of Great Britain released machine-operatives to the army and women took their places, that the wheels might go on turning and the necessities of life, both peaceful and in war, should go forward with even an increasing volume, they settled that matter in short order. American women—and not all of them, by any means, of the laboring classes—have been and are doing the same things now, countless thousands of them. Beyond that, they are taking up many kinds of work heretofore supposed to be possible for men alone; some kinds that never had been thought of as possible for women—and doing the work well, in many instances better than the men were doing.

As for the ability of women to fill their new functions in life, there can be no question. The best evidence of this is, that they are doing it. The women of today—many of them—are serious women, in whom conscience and reason hold sway over the effervescence of fancy and sentimentality. How many American women—and girls—are serving in France and Flanders, driving camions or ordinary service-cars, driving them thoroughly well, showing to those who come into their care a tender sympathy most helpful that men could never give? Think of the solid military efficiency of those Smith College girls, all of them gently bred, gently nurtured, who went without drums or trumpets, a unit that has made a new chapter in the history of American womanhood, on the most bloody fields of France! They, and those in the Red Cross, went calmly to the very jaws of death, not bent upon deeds of destruction, like the famous six hundred, but upon deeds of mercy. They had no Tennyson to sound their praise. Their only ambition was, that the recording angel might be their biographer, that their names might be inscribed in the Book of Life, and that they might receive the recompense from Him who has said: "I was sick and ye visited me—for, as often as ye did it to one of the least of these my brethren, ye did it unto me." The full history has not yet been told of how these young women, with many others following their lead, mothered the repatriated peasants of Lorraine last year and helped them to make an orderly

exodus the second time those fields were ravaged, only a few weeks ago.

There is not a line of endeavor behind the lines of fire where women, our women, are not taking the fortunes of war with quiet minds and steady courage. How many, nursing back to life friend and enemy alike in hospitals, have suffered murderous death, dropped by the Huns from the sky on hospitals near the front?

How many of our best and noblest women are giving themselves, their health, aye! all they have, to Red Cross work among the fighters! The Red Cross organization saved our first troops in France by furnishing abundantly necessary supplies which the government at Washington had not provided or could not. That organization, now indivisible from, and indispensable to, the army, is kept in funds and supplies by its women workers at home. Their service is immeasurable, but, performed without a thought of recognition or future reward of any kind. These women are patriots all, in the fullest sense and of a value so high that without them there is no guessing what our death-roll would have been.

The wonder back of all of this will never come to American civilians until they learn from those who have seen it how horrible, how nasty the work is that these women of ours, especially the nurses, are doing daily. There is no romance in it, no glory, but only work. One look-in upon its daily experience would make a home woman faint away. The casualties usually affect men who have been living in filth for days and days before they are torn with wounds and bloodied up. The nurses have to clean them and care for them, have to stand by the surgeon through operations indescribable. It's a job of blood, muck, vermin, and slop-pails; but it must be done. The men never could come through without the aid of these women. The most husky, the roughest of them, want women's care, are soothed by it, respond to it. In the ordeal of battle and wounds, there is an unconscious harking back to Mother; and, as Mother was patient and pitying, so are the

women. They are wonderful. They bring out the true mettle, the mother strength of a great race. And, in the future of that race, who shall deny them honor, who will not be glad to make equal place for them in all the affairs of life? Our American women need never ask of American men the favor of equal rights. Our men should be glad to have equal rights with them.

The world we used to know before the hurricane will never come back to us. The old order passes, giving place to new, and God fulfils Himself in many ways—a new God, too, for, the god of Middle Europe and of the middle ages will follow the other, and more frankly pagan, gods into the dark land of broken idols, and be seen no more.

The socioeconomic reconstructural processes recognize the expansion of woman's domains. Its labor is, to allot and assure each unto its own, that an era of better things may be hastened and come to bless mankind. In the readjustment, after peace comes, only one thing is definitely foreshadowed; a community of thought and of effort among all the peoples of British derivation, wherever they may be, men and women alike. Here is one of the ways in which God fulfils Himself; for, the long-continued and unconnected growth of colonies out of Britain, and nations out of colonies, shall culminate in a vast homogeneity. Not necessarily political, for, ties of that nature will be no more required than they have been in the past; but, a fusion of spirit, a consolidation of destinies by the fires of war. The bonds of intangible sentiment were strong enough before to bring all together in one cause, facing a test before which mere political ties would have failed utterly. The process of fusion could not have been set up in any other way. In it, lies the one great guaranty of safety for all humanity everywhere. It will last until this ball on which we dwell shall have completed its purpose and gone rolling down the eternities, cold and lifeless, upon its endless way; for, "wherever women are honored, the gods are satisfied."



Among the Books

"PATENT AND PROPRIETARY MEDICINES"

The Composition of Certain Patent and Proprietary Medicines. Compiled by John Phillips Street, chemist in charge of the analytical laboratory of the Connecticut Agricultural Experiment Station, Chicago: The American Medical Association. Price \$1.25, postpaid.

During the past few years, hundreds of "patent" and proprietary medicines have been analyzed by federal and state officials and especially by the chemist of the American Medical Association, with the object of giving the public information that would be of vital interest. Unfortunately, this information has been scattered throughout many publications and, for this reason, has not been easily accessible either to the public or to officials. The purpose of Mr. Street's compilation is, to remedy this difficulty, in a measure, by bringing together an accurate record of published analyses. Thus this book of 274 pages gives the analyses (one or more) of more than 2,500 proprietary medicines, including the most widely used and extensively advertised preparations offered to the American public. The analyses (3100 in number) are published without comment and without prejudice. The compact form in which they are presented should prove of great usefulness to the physician, the pharmacist, the inspection-official, and the intelligent layman.

MORISON: "BIPP TREATMENT OF WAR-WOUNDS"

The Bipp Treatment of War Wounds. By Rutherford Morison. New York: Oxford University Press. 1918. Price \$1.00.

One of the most unique developments in the realm of antiseptics that has come out of the war is bipp, a paste introduced by the author and the name of which in a way indicates its composition (bismuth-iodoform-paraffin-paste). It consists of a mixture of 8 ounces of bismuth subnitrate, 16 ounces of iodoform, and enough of liquid

paraffin (about 8 ounces), to make a rather stiff paste. This antiseptic was developed by Morison toward the end of the year 1915, as a result of the disheartening experiences following the methods of treatment generally in vogue. A fair idea of the scope of this antiseptic paste and the indications for its use may be obtained from the following statement by Doctor Morison, who is professor of surgery at Durham University, and senior surgeon at Northumberland War Hospital.

"If it is possible to get to the bottom of an infected wound, so that it can be thoroughly cleansed mechanically and suitable antiseptics be applied, the wound can be closed at once with interrupted sutures, always with impunity, and many times with the prospect of finding it healed when the dressing is removed for the first time at the end of three weeks. This fact has been proved by hundreds of cases and establishes a new principle in surgery, though details of the method can doubtless be improved."

The method of employing this bismuth-iodoform paste briefly is as follows: (1) Cleaning the surrounding skin area and the wound surface with gauze wrung out of a 5-percent carbolic-acid solution; (2) opening the wound freely, removing the foreign bodies and cleaning the cavity with dry sterile gauze mops; (3) mopping the surrounding skin and the wound cavity with methylated spirit (Brit. Phar.); (4) applying the bipp, which is rubbed in with dry gauze, any excess being removed; dressing the wound with sterile gauze; the latter to be repeated from time to time. When inflammatory signs have disappeared, the wound is sewed up after such an application of bipp.

Doctor Morison asserts that one of the most characteristic results following the bipp treatment is, the absence of the ordinary signs of inflammation, the rapid formation of granulations, and the complete absence of infections around the catgut

sutures, which, when smeared with bipp, are readily absorbed.

It is claimed that this method is very effective in the treatment of septic compound fractures, in the treatment of infected bone cavities and sinuses, and also in the secondary treatment of gunshot-wounds and other wounds of soft parts. It has also been used in cerebral hernia, after amputations, and, in fact, in all sorts of wounds. The danger of poisoning from absorption of bismuth and iodoform is recognized, but, it is said not to be great.

The bipp treatment is not intended as a first-aid dressing, for which purpose Doctor Morison recommends his magnesium-sulphate cream, made by mixing 1.5 pound of dry magnesium sulphate with 11 ounces of glycerin-phenol (1 : 10).

While this method of treatment is interesting and no doubt sufficient in some cases, it is not taken very seriously by most English surgeons. Sir Arbuthnot Lane, in his address before the Congress of Surgeons held in Chicago about a year ago, in his entertaining and somewhat humorous remarks relative to this method of treatment, made the statement that in a series of clinical experiments which he conducted with bipp he found that when using the same care in the cleansing of the wound, the removal of foreign bodies and necrosed tissues, and scrubbing with methylated spirit, patients that were "bipped *without* bipp" got along just as well as when Doctor Morison's "classical" treatment was employed.

FISK: "ALCOHOL"

Alcohol: Its Relation to Human Efficiency and Longevity. By Eugene Lyman Fisk. New York: The Funk and Wagnalls Company. 1917. Price \$1.00.

This volume presents a condensed and nontechnical statement of the most recent conclusions concerning the alcohol-problem, and is intended for the laity. The exigencies of the war have brought about an attitude with regard to the use of alcohol as a beverage that is far more determined than was that prior to the year 1914; and this regardless of the success of the prohibition movement through which an increasing number of states have become dry and even bonedry. One can hardly avoid the conclusion that prohibition is certain to become general, or, as the author suggests,

it is quite possible that society will, in the near future, settle the matter very definitely for the individual by making it as difficult for him to secure a drink of liquor as to secure a dose of morphine.

The author's attitude in regard to alcoholism may be gleaned from his categorical statement that after twenty-five years of close and wide personal observation his cumulative judgment is, that alcohol is a destructive force wholly evil in its total effects. He deprecates the too prevalent tendency to apologize for alcohol, to deal gently and tenderly with it, instead of bringing it to the bar of human judgment, to answer for its misdemeanors and justify its right to be exposed for sale on the street corners as a beverage harmless for the average man. It will readily be seen that the argument of the author is in favor of "bonedry" habits.

"PRACTICAL MEDICINE SERIES"

The second volume of the *Practical Medicine Series* for 1918, edited by Dr. Albert J. Ochsner, contains a review of the literature for the past year on general surgery. As a matter of course, military surgery has received the principal attention. There is information on anesthesia, on new instruments, on wound healing, and on many other topics that the military surgeon, as well as the home surgeon, is in constant need of.

The *Practical Medicine Series* is published in eight volumes per year, at a subscription price of \$10.00, and contains condensed information on the literature of the past year in individual volumes devoted to medicine, surgery and the specialties. This is a very serviceable publication and is deserving of the support of the profession

DANYSZ: "MALADIES INFECTIEUSES"

Principes De L'Evolution des Maladies Infectieuses. Par J. Danysz. Paris: J. B. Bailliere et Fils. 1918. Price 5 francs (\$1.00).

In this little volume of 170 pages, the author has undertaken to supply answers to several questions concerning the pathology, pathogeny, and therapy of the infectious diseases. Some of the questions are, how these diseases are acquired, in what they consist, how the diseased organism may re-

cover spontaneously, what is the mechanism of the curative action of biological or chemical products employed in the treatment heretofore, and, lastly, in what direction should the researches for new therapeutic methods be undertaken.

In his discussion of immunity, anaphylaxis, and other phenomena observed in connection with infectious diseases, the author devotes particular attention to the question of anaphylaxis, which he considers of primary importance in certain bacterial diseases, while it does not enter into pathological relation in others, notably, the so-called toxin-infections (diphtheria, tetanus).

It is an interesting little volume which this noted French author has contributed. His ideas often are novel and original and a study of this book will open up many interesting avenues of research.

SELTZ: "PHYSICAL DEVELOPMENT"

Direct-Method Physical Development: Applications of Direct Methods in Acquiring Nerve-Force and Muscle-Force, Combining Instructions in Full Respiration and Interior Exercises of the Abdomen. By Claus Seltz. Illustrated. New York: R. F. Fenno & Co., 1917.

This book contains some interesting directions for physical exercises and discussions, in conjunction, also of other factors that influence our physical wellbeing, such as food, clothing, bathing and numerous other things.

RENAULT: "MALADIES BLENNORR-HAGIQUES"

Maladies Blennorrhagiques des Voies Génito-Urinaires. Par Le Docteur Alex. Renault. Paris: Vigot Frères. 1917. Price fr. 3.50 (about 75 cents).

This little volume, being one of a series of books published under the general title of "*Bibliothèque de Médecine Pratique*," is timely, for the reason that gonorrheal infection plays an important part in the causes that render soldiers incapable of active service. Moreover, it is fully realized that neglect to treat, and cure, gonorrhea promptly and radically will reflect unfavorably, not only upon the patient himself, but fully as much upon his wife and children. The treatment of the subject by the author

is essentially practical and the book may be studied with advantage by American physicians who are familiar with the French language.

RADASCH: "HISTOLOGY"

A Manual of Histology. By H. E. Radasch, M. Sc., M. D. With 307 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$2.50.

The present manual has grown out of the quiz compend on the same subject and by the same author, the more full and complete treatment of the subject being made necessary for advancement in the science of histology. Surgeons and pathologists will find in it the most recent information concerning the structures of the various organs and tissues of the body.

CARLETON: "VENEREAL DISEASE"

The Seriousness of Venereal Disease. By Sprague Carleton, M. D., F. A. C. S. New York: Paul B. Hoeber. 1918. Price Fifty cents.

This little volume contains a collection of illustrations, with explanations, depicting various venereal lesions. There also are instructions to men having gonorrhea and to syphilitic patients. The pictures are of patients admitted for treatment at the Metropolitan Hospital, Blackwell's Island, New York City. The booklet is well adapted for distribution to venereal patients.

HUGGINS: "AMPUTATION STUMPS"

Amputation Stumps. Their Care and After Treatment. By G. Martin Huggins, F. R. C. S. London: Henry Frowde. Oxford University Press. 1918. Price \$2.75.

Having been surgical specialist at the Pavilion General Hospital at Brighton for thirteen months, the author was responsible for the treatment of about 3,000 amputation cases during the past year. He also made frequent visits to Roehampton House to see his own and other surgeons' cases fitted with artificial limbs. A number of pensioners who had been wearing artificial limbs and whose stumps had proved unsatisfactory, were sent from Roehampton to the Pavilion Hospital for treatment,

and from these cases much was learned. It was this last group, coupled with the number of bad stumps admitted to the Pavilion Hospital that stimulated the author to make known the information acquired there.

These remarks, reproduced from the preface, indicate the *raison d'être* of the little volume which is sadly needed at the present time. The fact that it specializes upon a limited and definite subject, rather increases its value than detracting from it. The size of the book is that of the "Oxford War Primers".

"INTERNATIONAL CLINICS"

International Clinics: A Quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery and so on. Edited by H. R. M. Landis, M. D. Philadelphia and London: J. B. Lippincott Company. 1918. Volume 2, Twenty-eighth Series, 1918. Price \$2.

Like all volumes of this series, the present one offers much useful material for study. There is an article on focal infection as a cause of keratitis and iritis, by E. V. L. Brown; one on the psychological handling of the tuberculous patient, by Charles L. Minor; one on babies and the rising cost of milk, by Joseph S. Neff; beside many others.

"PRACTICAL MEDICINE SERIES"

The Eye, Ear, Nose and Throat. Edited by Casey Wood, M. D., Albert H. Andrews, M. D., George E. Shambaugh, M. D. Being Volume 3, Series 1918, of The Practical Medicine Series." Chicago: The Year Book Publishers. Price for the series of 8 volumes, \$10.00 per annum. Price of this volume separate \$1.00.

This series of review volumes is published primarily for the general practitioner; while the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

PETERS: "DIET AND HEALTH"

Diet and Health. With Key to the Calories. By Lulu Hunt Peters, A. B., M. D. Chicago: The Reilly and Britton Company. 1918. Price \$1.00 net.

In the opinion of Doctor Peters, it

ought to be considered a patriotic disgrace in these war times for any individual to exhibit or harbor undue embonpoint. Obesity is *lèse majesté*. Any food eaten beyond what your system requires for its energy, growth, and repair, is fattening, or is an irritant. To the author's way of thinking, however, it is just as wrong to be unduly thin as it is to be fat. While she frankly is not particularly interested in the thin ones, and, rather, pours the vials of her caustic wrath out upon those who have vast amounts of the valuable commodity, yclept, fat, stored away in their anatomy, she, yet, is willing to treat the former tenderly and carefully, pointing out to them, first of all, that worry and yielding to the trivial annoyances of life does not pay, beyond keeping one thin.

The book contains not only much sound and "C. S." (common sense) philosophy, but, likewise, ample useful information regarding the best diet, the best foods to eat and to avoid. While intended primarily for laymen, its breezy and assured style, its refreshing briskness of expression and its cheery and encouraging teachings make it eminently fitted for the dignified *doctor medicinae*, the author's colleagues, at whom, we suspect, she sometimes gently laughs in her sleeves. Never mind. We are prone to take ourselves and our dignity too seriously. Democritus is a better guide, just now, than Heraclitus; for the very reason that there is so much heart-breaking woe, so much frightfulness in this world of ours that is so seriously ill. Read the book, doctor; it will do you good. Then prescribe it to your patients, the unduly thin as well as the unpatriotically fat. The former are unpatriotic, too, if they fret and worry instead of doing.

ALLEN: "LOCAL ANESTHESIA"

Local and Regional Anesthesia. By Carroll W. Allen, M. D. With an introduction by Rudolph Matas, M. D. Second edition. Reset. Philadelphia and London: The W. B. Saunders Company. 1918. Price \$6.50 net.

This volume contains chapters on spinal, epidural, paravertebral, and parasacral analgesia, and on other applications of local and regional anesthesia to the surgery of the eye, ear, nose and throat, and to dental practice. There is an interesting historical sketch on anesthesia, and an in-

structive study of pain. The anesthetic effects of pressure-anemia, of cold and water are discussed, and then the many local anesthetics are described. In the later chapters, the application of the earlier lessons is taken up, for operations on the various regions of the body.

CLARK: "DR. JANEWAY"

Some Personal Recollections of Dr. Janeway. By James Bayard Clark. New York: G. P. Putnam's Sons. 1917. Price \$1.00 net.

Dr. Edward Gamaliel Janeway was one of the great physicians whose devoted work placed American medicine upon the high plane it occupies today. A volume of personal recollections must in itself be of permanent value, especially if it is written by a friend, and colleague of many years, like the author.

OCHSNER: "PHYSICAL EXERCISES"

Physical Exercises for Invalids and Convalescents. By Edward H. Ochsner, M. D., F. A. C. S. Illustrated. St. Louis: The C. V. Mosby Company. 1917. Price \$1.00 net.

The purpose of this little manual is self-evident; it grew out of the need of the author of simple instructions for his patients. There is nothing intricate about it. Text and illustrations are so direct as to require no elucidation. The book is well worth while.

KEEN: "WAR WOUNDS"

The Treatment of War Wounds. By W. W. Keen, M. D., LL. D. Second edition. Reset. Philadelphia and London: The W. B. Saunders Company. 1918. Price \$2.00 net.

The second edition of Doctor Keen's "War Wounds" was called for only six months after the first was issued. It offers an authoritative description and discussion of the best modes of treatment of wounds as they are seen in the war zone. All the newest methods of treating shock, fractures, tetanus, wounds of head, chest, and joints are considered; notably, the Carrel-Dakin method, the Bull-Pritchett serum,

orthopedic surgery, the "Bipp" treatment, the treatment of burns with paraffin-wax preparations; the localization and removal of foreign bodies, and so on. This is one of the truly important contributions to the literature of war surgery.

NIFONG: "THE HODGEN SPLINT"

The Hodgen Wire Cradle Extension Suspension Splint. By Frank G. Nifong, M. D., F. A. C. S. With an introduction by Harvey G. Mudd, M. D. With 124 illustrations. St. Louis: The C. V. Mosby Company. 1918. Price \$3.00 net.

This volume contains the exemplification of the Hodgen splint, with other helpful appliances in the treatment of fractures and wounds of the extremities and its application in both civil and war practice.

MAY: "VENEREAL DISEASE"

The Prevention of Venereal Diseases. By Otto May, M. D., London: Henry Frowde, Oxford University Press. 1918. Price \$3.00.

The crusade against venereal diseases is entered by the author who deals with the subject from a different angle; that of preventive medicine. On that account, his book deserves praise and encouragement. The topics discussed are, in brief, education and instruction; prostitution and venereal disease; personal prevention or artificial prophylaxis; venereal disease and marriage; to which are added several appendices containing lecture to the troops and other important information.

"MEDICAL CLINICS OF NORTH AMERICA"

The Medical Clinics of North America. May 1918. Published bi-monthly by The W. B. Saunders Company, Philadelphia and London. Price \$10.00 per annum.

This number of the *Medical Clinics of North America* is the "Southern Number" and completes the first volume to which it contains an index. It gives clinics from the Memphis General Hospital, the Charity Hospital, New Orleans, La., the Columbia Hospital, Columbia, S. C., and from various other places. The subjects discussed all are of vital interest.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6388.—“Neurosis of Head.”—I have just read, in my July number of *CLINICAL MEDICINE*, the Query No. 6388, “Neurosis of Head,” and I believe that this patient has some lesion within his dental outfit. The fact that his temperature and pulse are normal and the blood and urine tests show negative results, however, excludes abscesses or pyorrhea. For

this reason, I would suggest that his jaws be radiographed for some impacted tooth, looking particularly for impacted wisdom-teeth, since these not infrequently give rise to disturbance similar to the ones complained of by the patient in question.

F. F. HAWKINS.

Troy, N. Y.

Queries

QUERY 6398.—“Objects to Biologics.” R., Virginia, in a long letter describing his successful use of small repeated doses of indicated definite remedies, criticizes our frequent recommendation of serums and vaccines. He says:

“I do not blame you for catering to the faddists, but, I think you overstep the mark in so strongly advocating bacterins and serums when we certainly have something better. For instance, I saw one case of poll-evil treated this summer with bacterins, and it was a failure. The way to cure that is, to make a free incision, clean out, apply iodine, and heal up from the bottom.

“Another instance: Dr. —, of Washington, D. C., had under his care a case of pulmonary phthisis, and, with other specialists, gave the patient up to die. In one night, I brought about a marked change for the better. When I was gone, the Doctor called and said, “I have to take off my hat to that man.” However, because of a slight rise in temperature every afternoon (which was at once controlled by the epsom-salt sponge-bath), he induced the father to consent to injections of tuberculin. This resulted in a very rapid failure, every injection

producing a high fever and suffering, and the patient's death followed soon.

“By the way, Doctor Aulde, of Philadelphia, cautions us against magnesium infiltration. I have seen nothing but good come from its external use.”

The present writer, naturally, is not prepared to defend the use of polybacterins in “poll-evil,” but, he understands that the veterinary department has consistently advised free incision and the application of iodine — or, later, dichloramine-T — with healing of the wound by granulation.

As a matter of fact, doctor, all intelligent therapeutists regard bacterins and serums as adjuvant remedial agents. It is only the extremist—or “faddist,” as you term him—who pins his faith to any one particular remedy or line of treatment and refuses to see good in anything else. For instance, thousands of lives have been sacrificed by the tuberculin-extremist; on the other hand, tuberculin, intelligently used, is invaluable to the modern therapeutist.

You will hardly deny the value of antitoxin in diphtheria; but, you would not like to place the life of your child in the hands of a man who believes that nothing but an-

titoxin should be used, and that, if that fails to make a favorable impression, nothing further should or can be done.

The serums and bacterins are new, extremely powerful weapons, supplementing those we already have, but, in no way replacing them. In the therapeutics of the future, biologic medication and drug-therapeutics will go hand in hand.

You must remember that the active principles were—and still are, for that matter—regarded by some ultra-conservative men of the old school as “dangerous innovations.” It is not advisable to condemn hurriedly or laud a product or process with which we are unfamiliar. Our education is never complete; but, the man who remains a student and keeps an open mind may, before he dies, have a fairly clear conception of the principles upon which medicine is founded.

Our grandfathers would have sneered—and did sneer—at the ideas which the first-year medical student now accepts as gospel; and our grandchildren will wonder how we possibly could have failed to discover the origin of, and cure for, such “simple” diseases as cancer and tuberculosis.

We can hardly believe that such a man as you name would deliberately set himself to oppose you when he believed that you really could materially benefit his little patient. Do not you think it is more likely that he regarded the improvement that followed your treatment as temporary, only—a fortunate coincidence—which would enable the patient to respond more fully to the tuberculin? A man so unprincipled as deliberately to deprive a patient of his chances for recovery, because he himself is not familiar with, or does not approve, the procedure of a confrère, who seems successful, could hardly attain eminence.

There are “small men” in the medical ranks, as elsewhere, and not a few egotists and hypocrits, but, the bigger men are, thank heaven, sound at the core, else they could not stand out above their fellows. We will not deny, however, that some of them are a trifle weak in their therapeutics. The latter unfortunate condition is due to improper teaching during their student days and the uncertainty and objectionable properties of the medicinal agents heretofore available.

Surgery, having none of these difficulties to overcome, has forged ahead with remark-

able speed, but, there is today a therapeutic awakening and the internist is destined to occupy a more prominent seat in the medical councils of the future. The family doctor who now is possessed of arms of precision and knows how to use them will “come unto his own” once more.

We agree with Doctor Aulde that subcutaneous injections of magnesium-sulphate solution are not always desirable. It is true that from 2 to 5 grains of pure magnesium sulphate, dissolved in from 60 to 100 minims of distilled water and injected subcutaneously, frequently produces prompt and thorough catharsis, but, we can obtain the same end equally well by other means, without risking serious derangement of the body-chemistry.

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QUERY 6399.—“Sprue.” A. H. T., Maine, writes:

I have an American patient from Borneo who has been, and is, suffering from what is known as sprue—a tropical disease that affects the bowels. He is much reduced in flesh and strength and has returned to his native country, hoping to recover. I have had no experience with this disease and I find that but very few of the textbooks make mention of it, while the most of them that do are very brief in their remarks and somewhat uncertain as to treatment. Can you help me?”

We take pleasure in giving you such information as is available regarding sprue or, technically, psilosis.

Rosenau and Anderson, in Musser-Kelly's “Practical Treatment” (1911, vol. II, p. 728), say:

“Sprue is a chronic catarrhal inflammation of the alimentary tract from the mouth to the anus, characterized by soreness and tenderness of the mouth and tongue, diarrhea of a peculiar character, and a decrease or entire loss in the elaboration of the digestive fluids. The authors' conception of the morbid process in sprue is, that it is an inflammation and destruction of the alimentary mucosa, resulting from a combination of dietetic and climatic causes. It is evidently not a disease due to specific infection.”

Bailey K. Ashford, in Musser-Kelly's “Practical Treatment” (1917, vol. IV, p. 367), says: “A chronic, probably infectious disease of warm climates, characterized by an atrophic inflammation of the mucous

membranes of the digestive tract, atrophy of the liver, excessive production of gas in the bowel, and a white or light-colored, abundant, foul-smelling, frothy diarrhea, a marked tendency to the production of a cachectic state, termed by Carnegie Brown 'marasmic toxemia.' Bahr's classification of complete and incomplete sprue can not be too strongly insisted upon. The complete form presents the four cardinal conditions noted in the definition above. Incomplete sprue is divided into (1) intestinal sprue, and (2) tongue sprue, whose mere designations are sufficiently descriptive."

Stitt, in "Diagnostics and Treatment of Tropical Diseases" (1914, p. 244), states: "Under the designation sprue, we have a form of chronic diarrhea, characterized by periods of improvement alternating with a return to the previous condition. The disease is afebrile, of insidious onset, and first manifests itself by tenderness of the buccal mucosa and vague digestive disturbances. The rawness of mouth and gullet is soon followed by ulcerations, especially at the site of the posterior molars, and a bare raw tongue. Exceedingly characteristic are the voluminous, frothy stools that are evacuated, irritating, and of an earthy palor. The disease chiefly affects Europeans who have lived in southern China, Cochin China, and Java, and, unless treated early, tends to progress to a fatal termination."

Ashford, in an article contributed to *The Journal of the American Medical Association* for March 6, 1915, states that, in certain cases of sprue, he found a monilia; and, in another article, which appeared in *The American Journal of the Medical Sciences*, he advances further evidences that the species of monilia previously described by him is the determining etiological factor in sprue, and he suggests that this species be recognized as monilia psilosis, Ashford.

C. Michel contributes to the January, 1918, issue of *The Journal of Infectious Diseases* an article on the use of a monilia-vaccine in the treatment of sprue. Another interesting article, on "Bacteriological and Experimental Researches on the Etiology of Sprue," by H. Dold, appeared in *The Medical Record* for February 3, 1917.

Creighton Wellman, in Forchheimer's "Therapeutics of Internal Diseases" (vol. IV), calls attention to the fact that Le Dantec has isolated a yeast from the stools of sprue-patients, and he believes this to

be the etiological factor. In a personal communication to Wellman, a Doctor Miller, of China, expresses his belief that the disease is caused by the continued consumption, by Europeans resident in warm climates, of canned and preserved meats and other foods. Wellman says that sprue has a tendency to increase and decrease in severity in cycles of greater or less regularity.

Probably the most complete discussion of sprue to be found in any textbook is that appearing in the "Manual of Tropical Medicine," published (1910) by William Wood & Co.

Few, if any, drugs seem to prove of value in this particular disease, and Anders merely states that early appropriate treatment, which is principally dietetic (milk-diet) and hygienic, may check the progress of the malady.

Montgomery, in an article on the diagnosis and treatment of sprue, which appeared in *The China Medical Journal* for May, 1910, describes the treatment for this disease by means of argilla, which is a finely powdered, desiccated, white clay. [Kaolin might do well]. It is said to relieve the symptoms of diarrhea in sprue, as, indeed, in other forms of diarrhea. The dose is large: 3 to 6 ounces of argilla stirred up with 10 ounces of water, and consumed in small portions during the day. The patient fasts for the first twenty-four hours and takes no food till at least three hours after having taken the argilla-mixture.

Montgomery also mentions the treatment by means of saverin, which is a culture of lactic-acid bacilli. When taken with milk, this passes almost directly to the small intestine and colon and there produces large quantities of lactic acid, with consequent coagulation of the milk and neutralization of intestinal toxins. Patients treated by this method are stated to have done well; but, it is only on trial and no judgment can be pronounced upon it yet. Under the circumstances, we should be inclined to think that galactenzyme or any equally active preparation of the Bulgarian bacillus would prove useful.

Sir Lauder Brunton, in Musser-Kelly's "Practical Treatment" (vol. I, p. 213), says: "One of the most troublesome forms of diarrhea, known as sprue, usually resists all medication, but, yields to an abso-

lute milk-diet, and sometimes more quickly, still, to an absolute protein-diet, consisting of minced beef and hot water."

Rosenau and Anderson state: "Some drugs undoubtedly are of value in the treatment of sprue. Brunton (*Edinb. Med. Jour.*, 1900, 7, 105), speaks with great favor of bismuth combined with tincture of cannabis indica. Begg (*Lancet*, 1898, p. 185) reports good results from the use of yellow santonin. He gives a goodly dose of castor-oil, to start with, and 5 grains of yellow santonin in sweet oil twice a day for a week. The administration of 5 minims of cyllin (W. Hartigan, *Jour. Trop. Med.*, 1905, Mar. 1, p. 65), in capsules that are not dissolved in the stomach, has lately been brought forward as useful. This dose is given every three hours. Manson reports good results from the intramuscular injection of very small doses of arsenate of iron."

Creighton Wellman, in "Therapeutics of Internal Diseases," vol. IV, says: "A number of drugs have been recommended among which are intestinal antiseptics of various sorts. Calomel, cyllin (3 minims; 0.2 Cc.), chinisol, and ipecacuanha, all have their advocates. Recently, Maxwell, Begg, and others have brought forward chromosantonin as a remedy. White santonin is said to be valueless. The *chromosantonin* is said to be a new drug, and not merely deteriorated white santonin, and is prepared by spreading the crystals of santonin out in the sun, turning them over from day to day until the crystals become yellow almost all the way through. Chromosantonin is given in 5-grain (0.3 Gm.) doses twice daily in olive-oil or castor-oil. It is said to be more useful in early than in advanced cases."

Bailey K. Ashford (Musser-Kelly's "Practical Treatment") says:

"So far, no specific has been found. Santonin and emetine hydrochloride are alike impotent to influence the disease, save in that they may relieve the unconscious sufferer of coexisting ascariides, on the one hand, or entamoebæ histolyticæ, on the other. The dietetic treatment alone has universally commended itself to practitioners in the tropics. The basis of success seems to be, the complete removal from the dietary of certain sugars and starches."

The monilia described by Ashford causes fermentation and it is stimulated by its most active development by glucose,

levulose, maltose, saccharose, and galactose. It ferments no other sugars.

Rosenau and Anderson (Musser-Kelly's "Practical Treatment" 1911, vol. II, p. 729) believe that sprue is not due to a specific infection, and hold that the rational treatment is, absolute rest for the inflamed mucosa, followed by the careful supervision of the diet. "No treatment can restore the destroyed mucosa; which emphasizes the importance of early and thorough treatment."

Schmitter, in *The Military Surgeon* for 1914, page 330, contributes an article on "Sprue Treated with Emetine Hydrochloride."

In *The Lancet* for June 6, 1914, page 1605, L. Rogers reports two cases of sprue treated by giving, by mouth, streptococcal vaccines, and emetine hydrochloride hypodermically.

Virtually every writer calls attention to the benefit derived by patients from a change of climate, and it is probable that by careful dieting and the administration of galactenzyme or bacillus bulgaricus bouillon and small doses of emetine you may be able to secure a marked improvement in your patient's condition.

QUERY 6400.—"Bulgarian Bacillus in Trachoma." C. J. C., Ohio, asks to be referred to literature on the use of Bulgarian-bacillus cultures in trachoma.

The literature on the use of the Bulgarian bacillus in trachoma is extremely limited; as a matter of fact, this writer was not aware that cultures had been so used until our correspondent's inquiry led to a search through recent journals. Although everything points to the microbic origin of trachoma, yet, up to the present time, to our knowledge and belief, no organism has been proven as causative and we still are in doubt as to what trachoma really is.

As to the query, Dr. J. T. Crawford seems to have secured excellent results from the continuous use of the Bulgarian bacillus, and he reports his experiences in two interesting papers, namely: (1) "The Treatment of Trachoma with Bulgarian-Bacillus Culture" (*Jour. Tenn. State Med. Assn.*, June, 1917, p. 71) and (2) "Bulgarian-Bacillus Culture in Trachoma" (*Ophthalmology*, Oct., 1917, p. 557). An earlier article by the same author appeared in the first-named journal for August, 1916.



DR. WILLIAM F. WAUGH

1848-1918

The American Journal of **CLINICAL MEDICINE**

Dependable Therapeutic Fact for Daily Use

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Doctor Waugh

IN the morning of the 5th of September, Doctor Waugh breathed his last and was released from the distress of the past months. The preceding days had been far more trying than usual and his strength evidently was ebbing fast. There was not much actual pain, except for frequent strangury that was due to a severely infected bladder and caused the writer to fear that the bladder had been involved by the malignant process. Needless to say, the writer paid frequent visits during that day and did everything he could to relieve the patient, even to the administering of sufficient doses of morphine. On the last visit of the 4th, about 7 p. m., Doctor Waugh was resting easily, his mind partly dulled by the opiate; yet, he smiled at the writer with his old genial good-humor, and wanted to know what was now going to be done to

him. He declared that he felt comfortable and might go to sleep. A little after 10 o'clock, Mrs. Waugh called up over the phone, saying that she was frightened and asked the writer to come over. He found Doctor Waugh unconscious, breathing heavily and evidently approaching death. Consciousness never returned and respiration ceased quietly a few minutes after midnight.

Doctor Waugh's personality was unique in many respects. During his long association with CLINICAL MEDICINE, for a quarter of a century, it was his scholarly erudition as well as his kindly sympathetic nature that gave to the editorial articles their characteristic attractiveness and distinguished them from those of most other journals. Doctor Waugh's writings formed not so much a contrast as a complement to the more aggressive articles written

by the editor-in-chief and by other editorial writers. He never left out of sight the human phase of things. It was he especially who always insisted upon it that the physician must not treat diseases but the patients who are afflicted with certain anomalies of function or with certain disease processes.

His style of writing was peculiarly his own. He had an unusually happy facility of expressing himself to the point and clearly as well as forcibly, but yet tempering his scholastic and didactic remarks with intimate personal touches that fixed the subject of his discourse in the minds of his readers. Widely read, having an almost inexhaustible fund of personal observations and experiences, Doctor Waugh always was able to enlighten the tedium of purely scientific discussions and he, more than anybody else with whom the writer is acquainted, managed to "get under your skin" and to drive his lesson home, withal in such a kindly and an unassuming manner that, while conviction enforced the lesson, it was not pounded in but administered pleasingly and acceptably.

The writer has met few men who surpassed or even approached Doctor Waugh in true and real depth of character. While he can not be said to have been an orthodox christian, in the accepted sense of the word, he yet was deeply religious. It is but a few weeks ago, on one occasion when the writer was ministering to Doctor Waugh that the latter remarked: "Doctor, do you know there is nothing that is so comforting as an absolute and unquestioning faith; faith that, whatever happens, it will be well; faith that it all will be for the best." In a constant and intimate association of many months between the writer and Doctor Waugh, religious subjects rarely had been touched upon, although almost everything under the sun has been discussed more or less. Doctor Waugh called himself an agnostic. He did not claim to know except that the universe was governed beneficently and that the human soul was greater and of more importance than the body—that it was immortal. Where he has gone, what he now sees, we do not know. We do know, however, that his influence will remain with us, being exerted toward making us gentler, kindlier, more sympathetic and, yet, studious and ambitious physicians, ever

striving for the greater good of our patients.

Help the Government and yourself at the same time—buy Liberty Bonds.

THE LOAFER

This war is, certainly, waking us up. One of the remarkable manifestations of the war-spirit is shown by the Chicago police in their attempt to round up loafers. Even in an enormous city like this, one cannot but marvel in observing how the movie-theaters, bar-rooms, billiard-rooms, hotel-lobbies, and other resorts are crowded with able-bodied men that apparently have nothing to do. The government now demands that these men go to work, if over thirty-one years of age, while there is room in the army for the younger ones. We venture the prediction that one result of this movement will be a vast diminution in holdups, burglaries, and similar criminalities. We do not now recall any instance of a similar action, excepting that when Napoleon swept up the lazzaroni of Italian cities and molded them into effective brigades.

There is work now for every man that can stand or sit up, and there are big wages to pay for it. It no longer is necessary for the middle-aged or elderly man to complain of being forced out of employment. He is needed and can make more money from his work than he ever did in his life. However, resting, such as comes when an elderly man is asked to give way to a younger or more energetic specimen, quickly and easily becomes a habit.

It is to be hoped that every state in the Union will follow a similar course. In this way, the gaps in the labor market caused by the demand for soldiers will be quickly and effectively filled.

AMERICANS AND THE HONORS —AND SPOILS—OF WAR*

We note in the daily press that the British government has proffered distinguished honors to several of our leading army- and navy officers. This is as it should be and

*This is one of the last editorials written by Doctor Waugh, and we print it without alterations. For, while showing in some degree the strain of the merciless disease that was sapping his strength, nevertheless it contains some of his old humor and a touch of his old happy vein of expression. It will be difficult, in many ways, to replace him.—ED.

the courtesy is taken as such by the American people at large, as well as by the recipients. When an American leader has performed some difficult duty in a way which certainly would be rewarded by a knighthood or other distinguishing mark of merit if done by a British officer, it is a graceful act in His Majesty's Government to do like honor to the American.

Nevertheless, our officers are in the right in declining to accept these honors. In the first place, it is against our laws, unless the reception is authorized by special act of congress. Secondly, it is un-American, for, as a country, we have set ourselves distinctly against the formation of a titled or privileged class among our citizens. Thirdly, we are engaged in a war for the distinctly stated purpose of making democracy a possibility. And, fourthly, it detracts, in a certain sense, from the merit of the performance, that there should be any possibility of personal reward or distinction beyond the consciousness of duty well performed. We are those who believe that a man should do right because it is right, and not for any hope of heaven or fear of hell. If a man goes "over the top" with the thought that he may be enabled thereby to write his name as Sir Hiram Suggs or Hiram Suggs, K. C. B., instead of plain Hi Suggs, it degrades the performance into something approaching the commercial.

This brings to mind an incident occurring during this writer's service in the United States Navy. Our ship was lying in the harbor of Rio de Janeiro, when one day it was announced that a huge Pacific Steam Navigation Company steamer had run ashore, some miles up the coast. It happened that there was no available vessel in the port that could be sent to her relief; so, we got up steam, ran up and pulled the stranded vessel off the rock. In due time, an agent of the Company appeared on board, stating that he came to arrange for the salvage. Our admiral replied that we wanted no salvage. The surprised agent urged, however, that the crew might feel differently and that they were legally entitled to a share, whereupon the admiral offered to muster the crew and ask what was their desire. This was done. To a man, the men responded that they would accept no salvage. As one tersely put it, "Naw, we're no bloomin' tugboat." The amazed agent stated that, had it been one

of their own men of war, they would have insisted upon every possible penny.

Be this as it may, we are very far, indeed, from suggesting or casting any slur upon our brave Allies. How could we, in the face of the grand work being done for humanity by Great Britain! The British Empire, France, Italy, Belgium, and the United States. Will the world ever forget the stand that has made heroism a matter of nations, instead of individuals?

The crew of our ship was a typical American one. The skeleton was of our native-born, and it contained representatives of every land in Europe, from Russia to Portugal. The extremes were presented by a huge Shinnecook Indian from the Long Island reservation and a native of Fernando Po. The last-named was so intensely black that the skin of his face was cracked like damaged lacquer, dull finish, not polished. But, all of them were members of an American ship's crew; all had imbibed the American, democratic ideas that give another reading to the old expression, *noblesse oblige*, and, possibly, a more worthy one.

After all, saving is not sacrificing.

KEEP YOUR LIBERTY BONDS

Your investment in liberty bonds was made because of your patriotic spirit, your desire to do your bit in a manner that would help our boys "over there" to the very best of your ability; and you should be congratulated for having done so.

You want our boys to hold on in their struggle for us, and, therefore, it is just as much *your* duty to hold on—to your bonds—"over here."

To sell your bonds, except those of the first issue, necessitates a sacrifice. Why not continue in that spirit of patriotism and sacrifice some little personal pleasure or perhaps some apparent necessity, rather than the necessary \$4.00 to \$6.00 per hundred on the bonds? Moreover, the throwing of many liberty bonds upon the market tends to lower their market value and, consequently, increases the loss of those holders who sell them.

"Our boys" are, in many instances, making the supreme sacrifice for *our* personal welfare, and the least we can do in return

is, to hold on to our bonds, even if it does require some sacrifice. In the end, we shall be repaid for that little sacrifice, for, there is slight doubt that these bonds—the safest and best on earth—will command a premium much greater than the discount one must lose at the present time.

Do not ever allow any promoter of questionable securities to induce you to part with your bonds in exchange for his stock that promises, and even may yield for a limited time, a higher rate of interest.

Many holders of the liberty bonds have been induced by their employers to purchase these government bonds and were allowed to pay for them in weekly payments. In this manner, they have accumulated assets, without even missing their cost, which otherwise they never would have owned.

For employees, the only way to save is, to set aside a sum when your salary is received or, better, to have your employer take it out of your pay-check each payday. In this manner, if you will make up your mind to live on the amount received, you will be constantly accumulating a reserve for that "rainy day" of which we hear so much but for which so very few actually prepare. In any case, it is a wise procedure to set aside for saving a definite amount of each sum received.

Let us definitely decide, right now, to follow this plan and subscribe for as much as we can possibly pay for within a reasonable time, holding our previous purchases or converting them into the later issues as they may be offered. In this way, we shall hold on for dear life, as our boys are doing, and shall greatly assist those boys and our Uncle Sam, while most of us will be agreeably surprised at what we shall have accomplished for ourselves.

HELP THE BOYS.

HELP UNCLE SAM.

HELP YOURSELF.

HOLD YOUR BONDS.

BUY MORE—ALL YOU CAN OF EVERY ISSUE.

Back up those who are offering their all—buy Liberty Bonds.

NURSES WANTED FOR CANAL-ZONE HOSPITALS

Applicants wishing to serve as nurses in canal-zone hospitals should be between the ages of 20 to 35 years (although unusually

well-qualified nurses may be considered up to the age of 40), be graduates of schools for trained nurses having at least a two-years' course, and must have at last one-year's subsequent experience in a modern and well-equipped hospital. Also, they must be American citizens, and, if foreign born, must submit satisfactory proof of citizenship. These positions ordinarily are subject to competitive civil-service examinations, however, since the eligible register of the Civil Service Commission is exhausted, that office has been given authority to appoint without examination, so as to avoid delay.

The entrance salary is \$85 a month, with laundry of uniforms; but, subsistence is not included. All female nurses will be furnished subsistence when present for duty, for which a deduction of \$20 a month will be made from their salaries. Free steamship transportation will be furnished from New York or New Orleans to the Isthmus, salary beginning on date of sailing. Yearly leave, with pay up to 61 days, may be allowed.

For further information, application form, etc., write Chief of Office, The Panama Canal, Washington, D. C.

THE NATIONAL LICENSING OF PHYSICIANS

The suggestion has been made more than once that physicians belonging to the Medical Reserve Corps of the United States Army should have the right, after the war, to practice in whatever state of the Union they may elect, without having to go through the formality of a state-board examination. One officer in the Medical Reserve Corps writes, in a letter to CLINICAL MEDICINE: "If we are good enough to care for the boys here and overseas, we ought to be competent to practice anywhere in the world, and there should be no questions asked further than that we have an honorable discharge from the Army when our services there no longer are needed.

There is much that might be adduced in favor of this position, and, undoubtedly, the fact that a physician is in the medical service of the United States Army should give him the right to practice in any state of the Union, even as the medical officers of the regular army are entitled to do.

Unfortunately, legislation looking to this end can not come within the jurisdiction of Congress, since the regulating of the medical practice comes within police power of the individual states; and the latter would resent any interference with legislation regulating the medical practice in the respective states. It would be necessary for all states of the Union simultaneously to pass laws admitting the medical officers of the Army to practice within their respective states without passing the customary state-board examination or other requirements now insisted upon.

We should like to hear from our readers, in civil practice as well as in the medical service of the Army, about this question. Without a doubt, it will receive some agitation sooner or later, and it may be as well for us to make up our minds regarding it.

When you buy Liberty Bonds you do not give—you receive.

A FIVE-MILLION ARMY MEANS FIFTY THOUSAND MEDICAL OFFICERS

With an army of three million men in the field or in training and, as contemplated, an expansion of this force to five million men, the Surgeon-General must have in the Medical Reserve Corps at least fifty thousand doctors.

The Medical Corps must keep pace, in growth, with the army's expansion, and it behooves every doctor in the United States, between the age of 21 and 55 and physically, morally, and professionally fitted, to arrange at the earliest possible moment his personal affairs and offer his services to his country in the capacity of a medical officer.

The United States is in the war to do her part in winning the struggle, and this can be accomplished only by a large and well-trained body of troops adequately cared for by a sufficient number of medical officers. The importance of the doctor's service and its relation to the successful outcome of the war can not be underestimated.

As the mobile forces increase in size, so is there an expansion of base hospitals and other institutions for the care of the sick and wounded, and there should be no lack of officers, when required, to give to our

patriotic boys that professional attention that is so essential.

It is well for the medical profession of the United States to realize at once that a Medical Reserve Corps of at least 50,000 doctors will be required to meet the demands of the Surgeon-General and upon which corps he can draw for needed medical aids.

We believe that by this time the profession of this country must be fully alive to the needs of the service; so, let every doctor that is qualified feel that he not only is doing his patriotic duty in offering his services as a medical officer, but, that he is relieving the tension of the Surgeon-General's office, by placing at the command of the chief officer of the medical department an adequate force, without the frequent beating of drums to supply the necessary number with each increase of the mobile forces.

If you have not already received an application-blank for commission in the Medical Reserve Corps, your nearest examining board or the Editor of this journal will be glad to supply you.

"CARRY ON"

The second number of *Carry On* is a strong appeal for a rational treatment of our soldiers returning maimed from the battlefield. These men are not asking for charity or putting in their claims promptly for pensions, but, for such reconstruction and training as will enable them to earn their own living without obligation to anybody. They don't want bouquets, but jobs.

We like this. It is true Americanism, and the present number of *Carry On* presents the subject with the vigor to be expected from Wilson, Roosevelt, Schwab and other vigorous American personalities. If out of his four limbs a man has but one left, let him learn to use that.

I once saw a young man who had suffered an amputation of one hip joint, but still supported a wife and five children by dancing a jig on a crutch. Another man made a fortune by losing a hand in a sawmill. Funds were raised to put him through a business college, and he went into fire insurance—and made a far greater success than he ever would have done as a sawmill hand.

The energy with which the project of rehabilitation is being pushed is an illus-

tration of that wonderful arousing of the American mind into activity occasioned by the war. Along this line we may call attention to the Japanese utilization of the blind as extractors of teeth. These men train their fingers by driving wooden pegs into boards, and extracting them with the fingers, until the latter have acquired an amazing strength.

The way to begin the aid of this movement is, to subscribe to *Carry On*. Send name, address and occupation to the office of the Surgeon-General, U. S. A., 311 Fourth Ave., New York.

The best club for a married man is, an armchair in front of a big fire-place, at home.

A GREAT POSTGRADUATE TRAINING CAMP

In connection with the March meeting of the General Medical Board of the Council of National Defense, which was held at Camp Chickamauga, Georgia, the dedication exercises took place of the Warden McLean Auditorium, a gift of Mrs. William McLean, whose son Warden was accidentally killed while in the Officers' Training Camp at Fort Oglethorpe. The formal presentation was made by Dr. John G. Clark, of Philadelphia, while Colonel Henry Page accepted the gift in behalf of the army, saying that it was his ambition to have in the Chickamauga camp a great postgraduate training camp and that he hoped to see all temporary buildings replaced by permanent structures.

General Gorgas argued convincingly for military training for medical officers. He said that, notwithstanding handicaps, the present American army has established a sanitary world's record; for, it has cared for 1,000,000 men and the death rate is 10 men per thousand, whereas Japan, during the Russo-Japanese war, was deemed to have accomplished a marvel when she kept her death rate down to 20 per thousand "This is but the beginning of Camp Greenleaf," he said. "This probably will be the focus of our medical activities." He said that Camp Greenleaf, located in the geographic center of 450,000 troops in training, seems the logical location for the one great medical training ground, with accommodations there for possibly 40,000 men, thus trebling its present capacity. He

expressed a wish that the Council of National Defense might interest itself in such a project, adding that, from past experiences, he was sure of their interest and cooperation.

Brigadier-General J. B. Erwin, the commandant at Camp Forest (adjacent to Chattanooga), in a happy speech indicative of the present cordial cooperation of the line-officer with the medical branch of the service, evoked enthusiastic applause when he advocated a detention-cantonment for the "laundering" of recruits before they are allowed to mingle with the men in camp; thus decreasing the chances of mumps and measles, diseases which, he declared, are certain to break out wherever large bodies of men are gathered in camp or barracks.

Lieutenant-Colonel Victor C. Vaughan recalled a visit to Berlin in 1907 and a talk with Professor Wassermann in which the latter expressed a fear that the 50,000 soldiers quartered in Berlin and the other like units in other cities indicated that "some day" Germany's military leaders would plunge that country in war, and that this might mean the dismemberment of the empire. Doctor Vaughan expressed the hope that some day he might walk through the streets of Berlin and see flying from public buildings the flag, not of France, nor of Britain, nor of the United States, but, of the Republic of Germany.

Doctor Vaughan, reverting to conditions at Chickamauga as he found them in 1898, when there was not a single microscope nor test tube in the camp, contrasted those conditions with the fact that a medical camp has here been established. He contrasted the attitude of the line-officer of those days with the work-together spirit of today.

Dr. Edward P. Davis, of Philadelphia, praised the spirit of the doctors in training, and reminded the audience that physicians really entered the profession of war when they became medical students.

The Warden McLean auditorium building is situated in the center of Camp Greenleaf. Besides the main assembly hall, there are several smaller rooms, including an orthopedic museum, library, and reference-room, lecture-rooms, study-rooms, and office. Since the opening of the camp, 4,000 officers and 20,000 enlisted men have been

trained and sent to duty abroad or to instruct at other camps.

COME ACROSS!

To keep the home fires burning, in other words, to continue to make CLINICAL MEDICINE the most interesting, the most helpful and the most really uplifting of medical journals, we need money. The cost of publication has been enormously increased. The postal rates have doubled and quadrupled, while thousands of our subscribers have been called into the military and naval service.

Brother, we cannot run without money—meaning *your* money. Therefore, if your subscription is in arrears, please don't wait for us to send you a bill, but remit promptly. Also, send in your subscription now for next year; and further, *subscribe for one or more of your medical friends in the service*. You can give no more useful present nor one which will be appreciated more highly.

Meanwhile, don't forget that we need the money Now. Three years for Five Dollars if you pay at once.

LIEUTENANT CLOUGH

We know that the many friends of Lt. S. DeWitt Clough, who for fourteen years has guided the destinies of the advertising and circulation departments of CLINICAL MEDICINE, will join with us in congratulating him upon his entrance into the United States Army. About two months ago he secured a commission in the Quartermaster's Department, and soon after was called to Washington, where he now occupies the important post of chief of the Office Service Branch, Administrative Division of the Quartermaster's Corps. While he is now stationed in Washington, he hopes that the national capital may prove but one station, and a short stop only, on the trip to Berlin. He has applied for field duty.

Since the beginning of the war, Mr. Clough has been restless. He wanted to get in. As a man with a family, holding a responsible position as one of our most important executives, some of us felt that he was needed at home and could do as useful work here as he could in the army. He had thrown himself, with all his wonderful resources of ideas and energy, into

patriotic work in this city. He aided in the organization of the Patriotic League of the 26th Ward, of which he was secretary and a member of the Board of Managers; he was secretary of the Liberty-Loan and Red-Cross Drives for the ward; and helped organize and was first lieutenant in the Illinois Reserve Militia. No man in this community has worked harder or done more faithful and efficient patriotic work; but, even this was not enough; he determined to throw up everything and get into the "big push".

We are proud of him, and we know that his friends, of which he has not hundreds but thousands in all parts of the country, will join with us in wishing him a quick trip to the other side, and "the best of luck". Some of these days—and may it be soon—he is coming back to us, for, Clough has not left us. We have just loaned him to Uncle Sam.

"STOP FEEDING OUR FOES"

The following interesting article, containing some excellent advice, appeared in *The Therapeutic Digest* for September, 1918:

"German-made drugs and chemicals are finding their way into the United States by clandestine methods and moonshine trade, and, doubtless, the Federal Government, through the custodian of alien enemy property, is making most strenuous efforts to stop it, but, these efforts must first have the whole-souled support of the patriotic physician.

"A large portion, indeed, a very considerable part, of the money used to make German cannon, ammunition, submarines and other destructive engines of war, including the barbarous liquid fire and the horrifying asphyxiating gases with which to fight American soldiers and sailors, was derived from the sale of German-made chemicals in this country. In other words, the physicians of this country, by their enormous patronage of German chemical firms, are enabling Germany to continue her ruthless and uncivilized warfare against us, and against the sons of physicians.

"That prescribing of these German-made chemicals always was wrong in principle is the contention of *Monthly Therapeutic Topics*. The American people have been, through them, systematically robbed for years, as they were and are exorbitantly priced, probably with this very war in mind, and this in turn has forced the

pharmacist to charge the American public excessive prices. It is a well-known fact, that should have sooner been brought to the attention of the American physician, that the illegitimate profits to German chemical firms, on chemicals sold in this country, run into many billions of dollars.

"The American physician is today in position to prescribe an American-made product with which to replace practically every German-made chemical, and at a much lower price and made under Government control. Galenicals made from indigenous American plants are freely available at reasonable prices, and should have the preference. It is, naturally then, our distinct duty as true Americans, individually and collectively, to eliminate entirely all German-made goods from our *materia medica*, and replace them entirely with honest American goods, not only for the duration of the war, but for all time. By thus boycotting the enemy's products the physician can strike one of the most effective financial blows at German industrial life."

We endorse the preceding, with one exception, and that is the advice that galenicals should have the preference. Now, as ever, active-principle remedies should have the preference, for a number of reasons: (1) because practically all of them are now manufactured in the United States, and, as a rule, in sufficient quantity, the only exception being those made from drugs of foreign origin and of which the galenicals are just as scarce as the alkaloids; (2) because the active principles require no alcohol in their preparation; their use economizes this substance and decidedly reduces the expense, dose for dose; (3) because the alkaloids and other active principles are more concentrated, more active, more uniform, more efficient, and because they require less bulk in shipment, thereby economizing space and reducing the burden upon our already overtaxed transportation facilities.

But, the advice, as a whole, is good. American-made synthetic chemicals, American-made active principles and other alkaloids—in fact, almost all medicines of vital importance of American manufacture are now available, and a still larger percentage will be available, providing the physician stands behind those endeavoring to free him from the thralldom of the German

chemical houses. Of course YOU are doing this, Doctor.

WHY SHOULD THE SURGEON-GENERAL APPEAL FOR MEDICAL OFFICERS?

Of the 146,000 doctors in the United States, it is a safe calculation that at least 70,000 are within the age-limit of from 21 to 55 years and are physically and morally qualified to serve as officers in the Medical-Reserve Corps.

Why, in view of this fact, the Surgeon-General's office should be hard put to secure a sufficient number of medical officers to supply immediate demands and to furnish a reserve force of between forty and fifty thousand doctors is not quite comprehensible.

Every qualified physician, knowing how essential his services are to his country at this particular time, should consider it, not only his duty, but, a privilege to take part in this glorious struggle for humanity and democracy.

This is the time when individual opinion must be sacrificed for the benefit of the whole, and the time is near when every doctor must be in one or two classes: either a member of the Medical Reserve Corps, United States Army, or in the Volunteer Medical Service.

If you are between the ages of 21 and 55 years and there is a doubt in your own mind as to whether you are qualified or not, let the Surgeon-General determine this matter by your applying at once to your nearest medical examining board for a commission in the Medical Reserve Corps.

A man is worth what he gets, for the simple, but, very excellent reason, that he gets it.

TWILIGHT SLEEP

Just why Harry Aranow, in his article in *The New York Medical Journal*, July 13, should designate it as a postmortem on twilight sleep, is not at all clear, for, he makes a strong plea for the method. He thinks that it died a sudden death, not through lack of real merit but, because it failed to live up to a false reputation. Physicians expected too much and patients were promised too much.

Nevertheless, he enumerates the following as universally recognized advantages: Twilight sleep unquestionably shortens the

first stage of labor. The actual perception of pain in labor is markedly diminished or entirely obliterated. The duration of the labor pain is shortened without apparently curtailing the length of the uterine contractions. The patient gets periods of complete rest between pains. There is entire absence of the agonized cries, and also of postpartum exhaustion and shock. Delivery usually is followed immediately by a deep sleep, from which the patient awakes feeling well enough to get up.

As drawbacks, he says that repeated doses of scopolamine are dangerous; an experienced physician and nurse must be constantly at the bedside; it prolongs the second stage and, consequently, the effect of the drug on the baby, and it fails absolutely in some cases. For these reasons, it is well not to promise too much when engaged for a coming confinement. Anyway, every woman expects to have a certain amount of pain at this time.

The time to begin the administration is, when the sufferer begins to say she can not stand the pain any longer. The man who sits still and does nothing to give the suffering creature relief is a brute, and an ignoramus into the bargain. Then is the time to begin with morphine and scopolamine. To one who has never employed this combination, it is a striking picture to enter the delivery chamber and find absolute quiet, the patient apparently sleeping, while the doctor and nurse sit quietly by the bedside. Each pain is followed by an interval of perfect quiet or soft-snoring sleep. When the occiput presents at the vulva, the patient is given a whiff of chloroform or ether with every pain.

Altogether, the report is an excellent presentation; quiet and sensible, not marked in the least by optimistic exaggeration or pessimistic prejudice.

THE RECUMBENT POSTURE FOR PARTURIENT WOMEN

A peculiarly inhuman practice was the custom of former days of obliging women, after confinement, to remain in the recumbent position for ten days. This was enforced in the belief that the body required absolute rest, in order to recover its equilibrium. Another reason was, the fear of pulmonary or cerebral embolism, cases of which had been reported in extremely isolated instances in women who had been

permitted to rise a few hours after delivery for the purpose of voiding urine or the emptying of the bowels. Both positions, however, are not well supported by the facts.

It stands to reason that in the recumbent position the uterus, which still is quite heavy, will fall backward and thus cease to drain. Adhesions may form between the ends of the fallopian tubes and the peritoneum, so that very often the unfortunate victims of excessive care are never quite well again. It has been the present writer's practice for years to insist after confinement that women change their position frequently, not only from one side to the other, but, even lying upon the face, in order to equalize the position of the uterus during the first days of its involution and to correct any tendency toward malposition. The recumbent position was permitted only exceptionally, for the purpose of affording a change. This custom is supported and commended by Dr. A. Laphorn Smith (*Brit. Med. Jour.*, June 8), who insists that we not only should permit, but, even urge the patients to have their position changed at frequent intervals during the first few days and to move their legs freely as soon as they are able to do it themselves. He even considers it as very important that they should be made to sit up on the chamber in bed three or four times a day, to urinate and empty the bowels.

VOLUNTEER MEDICAL SERVICE CORPS

We gladly publish the following at the request of Dr. Franklin H. Martin, chairman of the General Medical Board, Council of National Defense:

The Volunteer Medical Service Corps was authorized by the Council of National Defense on January 31, 1918. Under this authorization, the membership of the Corps consisted of all physicians who because of overage, physical disability, dependents, and essential home-needs were not eligible for service in the Medical Reserve Corps of the Army or Navy.

On August 5, the Council of National Defense authorized a change in the scope of the organization and an increase and amplification of its central governing board. Membership in the Corps as now authorized makes eligible to the Corps

every legally qualified physician, including women physicians, holding the degree of Doctor of Medicine from a legally chartered medical school, without reference to age or physical disability, provided he or she is not already commissioned in the government service. This organization has now the approval of the president.

The Volunteer Medical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors in the United States that have not yet been honored by commissions in the Army and Navy, and a representative board of governors consisting of officials of the government, associated with lay members of the profession, in which the civilian physician agrees to offer his services to the government if required and asked to so do by the governing board.

It is a method of recording all physicians that are not yet in service and classifying them so that their services when required will be utilized in a manner to inflict as little hardship on the individual as possible. It is a method by which every physician not in uniform will be entitled to wear an emblem that will indicate his willingness to serve his government.

As more than sixty percent of the physicians of the country will be utilized in caring for the industries at home and the health of the home people, this large percentage of necessity will be expected to maintain their home status and continue their ordinary professional work.

DRINK MORE WATER

In *The British Medical Journal* for June 8, Dr. A. Lapthorn Smith enlarges upon the great demands of the human system for water. The kidneys, the skin, the bowels, the lungs, all are calling for water, to enable them to carry on their functions. This applies in equal measure to men and women, but, in the case of nursing women, lactation makes a large additional demand. It has been said that many of the aches and pains from which women suffer would not have afflicted them had they been water-drinkers. The author declares that he has seen many women operated upon for gallstones, who would never have had them if their bile had not been a supersaturated solution of biliary salts ready to deposit crystals upon the slightest occasion. Many calculi have

been removed from the kidneys and ureters that resulted from the supersaturation of the urine with solid matter and would not have been formed if the specific gravity of the urine had been kept down by the copious ingestion of water. Early in his career as an abdominal surgeon, Doctor Smith came to the conclusion that the tragic deaths from pulmonary embolism, which years ago were much more frequent than they are now, both after operations and confinements, were owing particularly to the excessively fibrinous condition of the blood.

In general, physicians and nurses are urging their patients to drink water much more freely. Most of us can remember the time when fever-patients were prevented from assuaging their burning thirst, when women in confinement were forbidden to drink much and certainly were not permitted to drink cold water. Even quite a short time ago, nothing was allowed to pass into the stomach of the patient after abdominal operation, no matter how great the craving was for water or other drink. Doctor Smith relates that medical friends who have been operated upon have assured him that their greatest desire was for a drink of hot tea and, acting upon their suggestion, he now always prescribes it as soon as the patient comes out of the anesthetic, whether there is vomiting or not.

Altogether, Doctor Smith concludes that even before operation the blood should contain the full normal proportion of water and that the amount of liquid lost by vomiting, catharsis, sweating (hot operating-room), hemorrhage, and urine, either during the operation or immediately after it, must be replaced.

The patient should be given an abundance of water between meals and during the night. It may be hot or cold, sweet, sour or salty in the form of lemonade, barley-water, weak tea without milk or beef-tea; a jug and drinking-cup with spout should be left within the reach, so that it may be taken when wanted, without waiting for the nurse to come. These precautions, Doctor Smith is convinced, will diminish the danger of pulmonary embolism by the very fact that the relative amount of fibrin in the blood is less, and that there is smaller danger of coagulation.

Leading Articles

Dermatological Notes—III

The Pathology and Diagnosis of Eczema

By A. V. RAVOGLI, M. D., Cincinnati, Ohio

THE clinical symptoms of eczema, to be thoroughly understood, must be supported by microscopical examination and histological knowledge.

Microscopically, eczema exhibits all the characteristics of dermatitis, the alterations of which affect the epidermis and the papillary layer. The subpapillary connective-tissue elements also are somewhat affected, mostly through the enlargement of the blood- and the lymph-vessels. The congestion causes some edema of the papillæ, the exudation of serum, and the degeneration of the collagenous and the elastic tissues. Also, the effusion of the white elements of the blood is the cause of the proliferation of the connective-tissue corpuscles. In eczema, the connective-tissue elements remain small and may show some increase in the nuclei.

The epidermic cells of the cuticle show the principal alterations, which can be considered as an edematous alteration. The layer of the prickle-cells, the spinous layer, is affected, the keratinization of the cells not taking place; they consequently, are bound to necrose. This parakeratosis of the corneous stratum, through the accumulation of horny unkeratinized cells, forms masses in the form of scales. The scales of eczema are easily distinguished from the scales found in other skin affections, such as pityriasis rubra pilaris. In eczema, the epidermic cells are infiltrated with serum, hydropic with increased nuclei. In the other scaly affections, the epidermic cells are dry and atrophic, the nuclei are no longer perceptible. The increase in the serum, the hydropic condition of the horny

layer, causes the easy detaching of the scales and the denudation of the deeper layers of the epidermis. The masses of epithelial cells, together with the secretion of serum, mixed at times with pus, form cakes, which, getting dry, cover the underlying papillary layer in the form of crusts. This condition of the epidermis was called by Unna spongioid, and was accepted by the French authors as spongiose condition. The lymph, with its leukocytes, pushes through the spinous layers and, reaching the horny layer, detaches it, forming vesicles—which latter we have pointed out as characteristic of eczema. The epidermic layer forming the vesicle soon breaks and, with its contents, dries up, and forms crusts. It seems that the epidermic cells forming the horny layer in eczema are not in necrotic condition, but, are just pushed by the serum and detached, forming the vesicle. In chronic eczema, the horny layer constantly infiltrated with serum may undergo proliferation, and it is not rare to see a certain degree of akantosis. When the papillary layer, under constant irritation, shows proliferation of its connective-tissue elements, it may form small papillary bodies covered with hypertrophic products of the horny layer.

In the crusts of eczema, many different cocci have been found by Unna, Malassez, Sabouraud and others, but so far not one of them can be considered as the factor of the disease. As for ourselves, we adhere to the staphylococci as being the cause of eczema.

As previously stated, we find in a great many cases of eczema foci of purulent mat-

ter, either in the duct of the ear, in the gums, in the tonsils or concealed in the nasal sinuses. The idea of the role of anaphylaxis is a very good one, but, it seems not to explain much, rather adding to the confusion. That food-proteins, acting upon sensitized body-tissues, may cause urticaria or erythema as a consequence of anaphylaxis, we believe, but, we never can accept this theory with regards to eczema, which we have seen to be the result of pus-germs in the epidermis and the papillary layers. Neither can we accept the views of Gougerot, who considers eczema as a defensive reaction on the part of the organism to get rid of toxins, when at first, we see eczema limited to some fold of the skin and to spread only after some time.

When new crusts are formed in eczema, when new rhagades are furrowing the affected epidermis, a relapse of the eczema takes place, new vesicles being formed; thus showing that the virulent pus-germs have found their way into the depth of the epidermis and causing the reacutezation of the disease. We find that impetigo has to be separated from ordinary eczema which, however, has no bearing upon the nature of the disease. Impetigo is the result of staphylococcic infection and, if not cured soon, may bring on eczema. Eczema impetiginosum can not be entirely discarded, when, in some cases of eczema, especially of the scalp, we see dense, thick crusts formed by pus and greasy substances from the irritated sebaceous glands.

Eczema is an inflammatory affection of the epidermis and papillary layer, which shows different degrees, according to the time and to the liability of the skin. There can be no doubt that the staphylococci, which live as saprophytes in a healthy skin, become pathogenic in a poorly nourished skin. An irritation or a dermatitis that causes an abrasion of the epidermis will open the door for the attack of the germs. Hyperemia, active congestion or exudation causes the formation of vesicles, as well as all the symptoms that we have gradatim and carefully considered in a previous chapter.

Differential Diagnosis of Eczema

Eczema is so changeable and its symptoms are so inconstant that it requires to be studied in comparison with the other skin diseases, which, although entirely different, yet, may be easily mistaken for it.

Moreover, we have already mentioned that eczema often accompanies other diseases of the skin and that it is only a complication.

It would seem that, having present the symptoms, inflammatory edema, small nodules, vesicles, abraded red surfaces, oozing serum, pustules, and crusts or a red surface covered with scales, nobody can mistake eczema for any other disease.

The changes in the symptoms of eczema mostly depend upon the intensity of the inflammatory process and upon the phase into which the disease has entered. At all events, an acute eczema begins with redness and swelling of the skin (eczema erythematosum and papulosum), it is then followed by vesicles and oozing (vesicular and seeping eczema), then there will follow crusts and scales (eczema impetiginosum and squamosum). The second period represents the acme of the disease, while the third, or last, shows the involution of the process.

The beginning of an acute eczema will be difficult to be separated from an artificial dermatitis. It is the same question of an artificial dermatitis Devergie or of an acute eczema of Rayer. In the practical case, however, taking under consideration the region in which the affection has developed, where the skin has been exposed to irritating physiochemical or mechanical agents, the sudden onset of the inflammation a few hours after the exposure, and the individual who has never suffered with eczema, these factors will prompt the diagnosis of dermatitis calorica, actinica, venenata or ab acribus, which, when an individual has been already subject to eczema, without there being a patent cause, is suddenly seized with redness, swelling of the face, neck or of auricles, eyelids, with small vesicles, and oozing of serum, will surely be a case of an acute eczema.

In patients of an advanced age, red-brownish patches are found in the face, nose, ears, and neck; the epidermis is rough, thick, in some patches glistening, in others covered with greasy crusts; and it is accompanied by an itching sensation. These are patches of keratosis and are referred to a precancerous condition. They remain dry, never show vesicles nor ooze, and have nothing to do with eczema. They must be treated by means designed to destroy the thick epidermis and to obtain a

new soft epidermis covering. We have already stated that, often, eczema accompanies other diseases of the skin, especially those of an itching type. It is, therefore, of great importance to differentiate eczema from the other diseases that are the principal cause of it.

Forms to Be Differentiated

Prurigo, in all its different varieties, is often accompanied by eczema. Prurigo is a dry form of skin affection, made up of small dry subepidermic papules, isolated, their tops covered by small black crusts, which give the impression to the exploring finger as of sandpaper; it is accompanied by an itching sensation, which may prevent the patient from sleeping. It is a disease by itself and has no relationship to eczema. By scratching, the patient wounds the skin, excoriates the papules, and then eczema is soon produced. In this latter case, eczema is only an accompanying symptom, while prurigo is the principal disease. It will easily be discovered that the patient has suffered from prurigo since childhood and that eczema has come on only at times, mostly when the patient has had a recrudescence of the symptoms of prurigo.

In *scabies*, we may find eczematous patches in different parts of the body, mostly those exposed to friction. In those who by their trade are compelled to sit down, such as tailors and seamstresses, the buttocks often are affected with eczema, on account of their rubbing against the seat of the chair. Under the axillæ, under the breasts of women, in the folds of the skin of the abdomen, in the crurogenital fossa, eczema is the result of scratching because of scabies. It will not be difficult in these cases to ascertain the presence of scabies and that eczema is only accompanying the latter. This, of course, has to be removed first before a cure of the eczema can be effected.

In mentioning the causation of eczema, we have pointed out that *seborrhea* of the scalp often is the factor of the disease, especially in children. Seborrhea of the scalp is so intimately connected with eczema that some authors have called it seborrhoic eczema. We do not think it necessary to establish such a variety of eczema, but, that it is better to consider eczema as a complication of seborrhea. In this case, the epidermis is red and covered with yel-

lowish dirty crusts adhering firmly to the epidermis and to the hair-follicles, while serum is oozing from the excoriated epidermic surface. Eczema that has developed under the greasy crusts of seborrhea does not remain limited to the scalp, but, extends to the forehead, auricles, cheeks and neck, as a diffused redness, with small vesicles, excoriations, oozing serum, and a burning and itching sensation.

Herpes tonsurans, trichophyties, often is mixed with eczema. In clear cases, the lesion is well defined and easily differentiated from eczema; but, in many cases, when, on account of the stubbornness of the affection and of the scratching, eczema is a complication, it is not so easy to differentiate. Patches of stubborn eczema of the palms and of the metacarpophalangeal region have quite often the trichophyton as their cause. One of the characteristics of the presence of trichophyties is, the eczematous patch, which remains limited, for a long time, does not grow much, is round in shape, and has small papulous vesicles, mostly near the edge of the patch. The so-called eczema marginatum of the crurogenital fossa is often mistaken for real eczema, but, it is a parasitic affection of the trichophyton variety. In cases of doubt, the microscope will reveal the presence of that parasite.

Lichen, planus or acuminatus, has nothing to do with eczema. The papules of lichens are dry, glistening, polygonal in shape, with a small depression in the center. Unless, on account of the irritation from scratching, eczema should occur, this is only an accompanying incidental affection. In some cases of lichen urticatus, it may be found somewhat difficult to establish the diagnosis. The small papules of lichen are dry, isolated, and no vesicles or oozing can prompt the diagnosis of eczema.

Some cases of *lichenification* (or lichenization, as it is called by the French) are difficult to separate from eczema. It is possible that they are the result of the inflammation of the papillary layer caused by the chronic, long-standing eczema. It is also possible that it has something to do with lichen. They are patches of thickened skin, formed by little coalescent papules, red-brownish in color, round in shape, and of the size of a silver dollar to that of the palm of the hand. They are found around the axillæ, the flexion-

surface of the joints, the neck, and the genitals. The hard, thickened skin, with the small papules, resembles chagrin-leather, and they cause a great deal of itching. These patches have also been considered a neurodermatitis by Brocq. They are chronic and rather refractory to treatment.

Dermatitis herpetiformis is entirely different from eczema. The vesicles here are scattered over the surface of the body, are small, separated, and grouped in few clusters, so as to recall the disposition of herpes. It also is accompanied by itching. It can be associated with eczema only incidentally.

Impetigo contagiosa may be mistaken for eczema impetiginosum, especially when affecting the scalp. The presence of other groups of vesicopustules on the face and hands helps to differentiate it from eczema. Impetigo contagiosa due to a more virulent kind of pus-germs has a more rapid onset. The vesicles soon turn into pustules, and their dried contents form hard yellowish crusts. The eruption takes on a roundish conformation. It is very contagious, and often it is found that several children in a school or in a neighborhood are affected with a similar eruption. It is easy to distinguish the affection from eczema; but, when not early recognized and not properly treated, it may be the starting-point of eczema, and then the diagnosis will be difficult. Even *lupus erythematosus* of the diffused type may, for a while, be mistaken for eczema; however, the absence of oozing and of vesicles, the erythematous lesions somewhat elevated and of dark-bluish color, affecting mostly the palms and the interdigital spaces will soon make the diagnosis clear.

The papular eruption of *syphilis* in the secondary stage may be accompanied by eczema. Mucous patches around the genitals or around the breasts of women, by their irritant secretion, cause maceration and excoriations of the epidermis, and thus frequently eczema is produced. Syphilis has nothing to do with eczema, except that because of the foul secretions moistening the skin eczema may supervene. Condyloma planum or mucous patches are so peculiar and so characteristic that they are soon recognized. In cases of syphilis of the papulosquamous type affecting the palm of the hands, there

may be some doubt about differentiating it from palmar eczema. Eczema of the palms is in form of patches, somewhat hard, covered with thin scales, irregular, while the papulosquamous syphilide shows papules, always brown-reddish in color, and disposed in somewhat round plaques, with large, thick scales.

Prognosis

As a general statement, eczema is curable in all its varieties, both acute and chronic, in all its stages, and whatever the cause. Whenever eczema can not be cured, it has to be more closely investigated. It may be that prurigo or lichen is the substratum and that the eczema is only an accompanying affection, and, with some patience and perseverance, we shall be able to bring it to recovery. In some cases, the treatment is not carried out as it should be, owing to lack of nursing or, as it occurs in children, the difficulty of keeping them from scratching and in maintaining the local applications in place.

It is difficult to have a permanent recovery in those cases of eczema caused by the occupation. The patient goes back to his work, is exposed to the same chemicals, to the same irritation, and, of course, is liable to get eczema again. In the same way, in the case of those addicted to immoderate use of tobacco or alcoholics, if they do not abstain, we find it difficult to effect a permanent cure. When foci of local infection are present, such as abscesses, sinuses, ulcers, and varicose veins, it is necessary to remove those foci, to open the sinuses and remove the purulent collections. In the same way, the varicose veins have to be healed up; or if necessary, they may be ligated or removed. Impetiginous eczema of the scalp often is connected with the presence of lice, and, in order to cure the eczema, these parasites must be removed.

The stubbornness of eczema is, in many instances, the result of the manner of applying the remedies. Some physicians are spreading the superstition among their patients that the skin, when affected by eczema, must not be washed, but, this results in dirt, crusts, and secretions forming thick crusts, and tends to keep up the cause of the eczema. On top of those crusts, they apply a salve, which remains on the crusts without any possible effect on the

excoriated surface of the papillary layer.

Eczema is a curable disease, the idea of the metastasis from eczema, especially in children being wrong. Eczema has never traveled from the skin to the lungs or to the meninges. It must be cured by all the means at our disposal.

As already stated in a previous chapter, eczema is not a hereditary disease—no-body has ever transmitted eczema to the offspring—and the patients have to be assured that, when they are cured of eczema, their offspring will not be affected.

[To be continued]

The War Work of the American Woman

By IDA M. TARBELL, New York City

EDITORIAL COMMENT:—While this communication by Miss Tarbell was intended for the Woman's number (September issue) of "Clinical Medicine", it will not detract from its interest that publication was possible only now.

AFTER sixteen months of war, things are just beginning to be so shaken down in this country that we can see with some definiteness what the essential lines of war-work for women must be.

At the start, there was a tendency among women everywhere to look across the water and prepare to do here what women were doing there; but, it was not long before it became obvious that our country had very different things to do—its women particularly.

Women and the Food-Campaign

Almost immediately, it was grasped that America's great work, outside of that of her army and navy, was, to be feeding the Allies. It was at once recognized by the president and by Mr. Hoover that, if this work of feeding were done, it only would be through the cooperation of the women. Thus the food-campaign became, and remains, the preeminent war-work of the American women. No one that has studied their effort to date will take issue with Mr. Hoover when he says that, while the whole American people have cooperated wonderfully in carrying out the program of the food administration, it is to the American women particularly that gratitude is due. They have begun to understand what is required of them, and to do it.

And now comes the great task of holding the community steady, as long as the war lasts, to this program. Food will be raised and saved or substitutes found and used in sufficient quantities only by the effort of the aggregate of our people. We can not afford to have anywhere, in any community a food-slacker. The great body

of educated, serious women understand this.

A large, new, and vastly important food-campaign is being put up to them now in the educational work necessary everywhere to swing into line the great numbers of uneducated people who do not have the time or the means of learning the importance of the food-campaign or the ways of following it out.

The real soldier in the women's food-army not only raises, saves, and substitutes, but, she teaches her neighbor why and how to do the same thing.

Women in the Red-Cross Work

After the food-army, come the Red Cross and relief armies. If the American wounded are being properly taken care of in Europe today (and we believe that to be the case), it is largely because of the astonishing response that women have made to the call for supplies of all kinds. Virtually the whole woman-power of this country is organized in Red-Cross work. There never before has been such an exhibit in the history of the world as women are making today, and the wonder of it is that so large a part of the work is being done by women already burdened with family cares. The hard-working women of this country are doing the bulk of the Red-Cross work. The women, too, are responsible for raising the bulk of the funds for the Red Cross. They feel that this is *their* institution, and they are right in that feeling.

The Drive for Nurses

One of their latest efforts has been their drive to bring into training for nurses greater numbers of young women. The

need for nurses can not be overestimated. The army is exhausting the supply of the country. We must prepare for new drafts, and we must not in the meantime allow our own sick and suffering at home to be neglected. It shows scant appreciation of the fighting man in the field to allow his wife and his children to suffer for a lack of nursing here, even though we are sending everybody that we can muster to him. It is up to the women of the country to see to it that both things are being done; and there is no question at all that the young women will rally to this noblest of service, if the problem is put before them properly. Training, to keep full the ranks of this important profession, may have none of the glamor of serving in France, but, it is one of the most fundamental of war-needs.

Securing Funds

Our experience so far in the war shows that another permanent task demanded of women is, to conduct the drives for money, and we realize now that this will be with us as long as the great undertaking is on hand. The women, from the start, took on a large part of the burden of these drives. They have been increasingly important in the Liberty-Loan drives. Without them, neither the Red Cross funds nor the Y. M. C. A. funds could have been raised in the prompt way that they were.

In every community, we find that women are settling into this as one of their fixed war-obligations. The methods of conduct-

ing these drives should be carefully studied, and betweentimes the woman-force be enlarged and instructed. Each successive one ought to be done more easily, and each successive one ought to reach effectively larger numbers of people.

The accepting of these tasks by women is contributing enormously in keeping up the morale of the communities; and, after all, there is no more important war-work for women than just that—to hold a community steady under the repeated shocks and strains and horrors of prolonged war. The keeping up to par of every social, educational, and religious institution in a community, the determination to hold the community in such a way that, when the warrior comes back, he will find something as good or better than he left—that is eminently woman's work. When she settles down, as she is doing, to understand what her great campaigns are, to tackle them steadily and persistently, she will find that this very fact helps her immensely in this most-important of tasks of keeping up the morale of the community.

It makes up a most dignified and serious program for the American woman. It calls every woman into ranks. Nobody can escape the obligation in regard to food, to relief, to helping in finances. It is right here at our door. And it emphasizes a fact most important in life, that you come to a crisis such as war. It is the great simple, obvious, everyday things that are of real importance.

After Thirty Years—VI

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from September issue, page 671.]

Secrecy, and Medical Ethics

IT IS not my intention to reproduce the code of ethics in these articles, but, simply to discuss certain phases of ethics that many times are disregarded or violated. One of these is, the obligation resting upon the doctor to observe secrecy regarding the private affairs of his patient. Not only are there many ailments the nature and details of which are none of the public's business, but, the doctor, as a result of the peculiarly confidential nature

of his work, often comes into possession of family secrets.

The patient has a natural and inherent right to expect that his physician will be faithful to the trust reposed in him, and not make public any information obtained through their confidential relations, if that information could cause embarrassment or annoyance to himself or his friends. Thus, for instance, a woman may object to having it known that she is suffering from piles or painful menstruation or that she is the involuntary hostess of a tapeworm.

This is her privilege, and the only safe rule for the doctor to follow is, to be as silent as the grave regarding the affairs of his patients; even his own family are not entitled to share his knowledge of those affairs. Some patients do not come as readily to an office in the doctor's home as they would to an office in a business-building, and one of the reasons is a feeling of shyness as to the doctor's family. They experience a degree of embarrassment at the possibility of others than the doctor himself having a knowledge of their ailments.

Privileged Communications and the Law

In most countries, the confidential relations of physician and patient have, in the past, been respected by the courts. Information obtained by the doctor in the exercise of his professional duties has been on the same plane as that obtained by the priest in the confessional: both are held to be privileged communications. Although in some instances this may be of advantage to criminals, yet, on the whole, broadly considered, it seems to me sound public policy. If the law were to disregard this privilege in the case of the physician, I can see no reason why it should not be disregarded in the case of the priest; and it seems to me that the complete abolishment of the privilege would entail far greater evils than does its maintenance.

Of late years, there have been changes in the law in some states, and physicians have been punished by the courts for refusing on the witness stand to reveal secrets acquired in the exercise of their duties. The new law in this state (Illinois) requiring physicians to report venereal disease is an illustration of this tendency. Of course, the object in view is a praiseworthy one, namely, the protection of the community against the ravages of venereal disease, from which the innocent suffer as well as the guilty. But, it is an open question whether the harm done by this publicity may not overbalance the good. Only time and an unprejudiced observation of the workings of such a law can settle the question.

I can imagine cases—in fact, I have met cases in my practice—where I should feel it my duty to disobey such a law and take the consequences. Doctors have been sent to jail for taking this stand. Individual sacrifice sometimes is necessary to uphold a principle, and I have no doubt that the

members of the medical profession would have the courage to resist the attempt to compel them to violate the confidences reposed in them by their patients. In civilized countries, the law does not require a man to incriminate himself, and it would practically amount to that if the accused could be convicted on evidence communicated in confidence to his spiritual, legal or medical advisers and wrung from them by a court. The history of the world shows that the rights of the individual have been maintained by individual sacrifice. Men are dying today in France in defense of the principle of individual rights.

Let us suppose that the doctor, in the exercise of his profession, comes into possession of the knowledge that a crime has been committed. He may be called to save the life of a woman having had a criminal abortion performed; or, a wounded burglar may call upon him for surgical aid. Shall he refuse his succor until he has ascertained whether there has been a crime committed? Certainly not. Shall he later take his professionally acquired information to the authorities? Not, unless the circumstances are extraordinary. He is neither judge, jurymen, nor public prosecutor, and he is not morally bound to assume to himself the duties of these functionaries. His duty is, to save life, and, ordinarily, it ends there. I can imagine a crime so heinous that the doctor would be justified in actively helping to bring the criminal to justice. There are some criminals that have forfeited all human rights and deserve no more consideration than does a wolf; but, usually the doctor may safely leave the machinery of justice to do its duty, while he confines himself to his own.

Some doctors, when called to a victim of abortion, refuse to take the case unless the patient confesses to the identity of the person causing it. This seems to me utterly unjustifiable, because utterly futile. What proof has one that the patient is telling the truth? Some doctors claim to take this stand in self-protection. But, the doctor can protect himself quite as well by having the patient absolve him, personally, in the presence of witnesses, from complicity, if he feels that his own reputation for integrity is not a sufficient protection.

As to wounded criminals, even though I might have no compunctions about bring-

ing such cases to the notice of the authorities, an instance or two from my own experience will show of how little value would be the effort to play detective.

One night at about 11 o'clock, two men entered my office. The one had a jagged torn wound in the palm of his hand. He said that they were loading some old planks upon a wagon, when a projecting nail in one of them caught him in the hand and tore its way through. I learned afterward that they had tried to rob the conductor of a horse-car. The driver came to his assistance with the car-hook, an instrument now obsolete, but, in those days used for quickly hitching the horses to the car. One of the robbers literally "got the hook", as they say in vaudeville.

On another occasion, I was called to see a man with a bullet in his foot. He explained that he had been cleaning a revolver and "didn't know it was loaded." The truth was that he had tried to hold up a citizen, who proved to be game, and in the struggle the robber got his own bullet in his foot.

In the case of an abortion, the patient can very easily tell some plausible story, which the doctor can not disprove on the spot. For all he can tell, the patient may have brought it on herself, although it may have been accidental.

All that can be asked of the doctor is, that he shall not *actively* obstruct the course of justice. If his contact with a case brings him into court as a witness in a state where the law would require him to testify, he must decide for himself whether the principle at stake is such as to justify a refusal to testify. As a rule, it would be best to engage an attorney and be guided by his advice. Common sense would seem to require that facts necessary to establish justice should not be privileged, while all others should.

The Virtue of Patience

As a matter of course, the doctor should exercise unlimited patience with the sick and to some extent with the members of the patient's family. Not only illness, but, also extreme anxiety is prone to render people unreasonable. However, the doctor is under no obligation to extend his patience and consideration to meddlesome friends and neighbors that obtrude gratuitous advice or criticism. Such people do an immense amount of harm, even to the

reputation for integrity is not a sufficient protection.

As to wounded criminals, even though I might have no compunctions about bringing such cases to the notice of the authorities, an instance or two from my own experience will show of how little value would be the effort to play detective. extent of causing the sacrifice of life. They are difficult to deal with, because they work in the doctor's absence, and because it is a great deal easier to arouse prejudice than to subdue it.

The best that we can do in regard to this class is, to try to forestall their efforts by educating our families by a bit of teaching, from time to time, to develop saner ideas on the subject. That bane of the profession, the tendency on the part of the ignorant to change doctors as soon as a condition becomes serious, mostly is the work of meddlesome friends. It not only is the doctor that is wronged, but, the patient as well. A new doctor coming into the case is at a disadvantage, in not being familiar with its course and treatment up to that time, and he is not able to work with perfect confidence, feeling that his tenure of the case is insecure, as people that have changed once are liable to change again. When people talk of changing doctors, we should remind them that those who are always doing that get the poorest service.

Frequent Visits

Frequent visits are a help and encouragement to the sick. The doctor should see his patient often enough to keep thoroughly informed as to the progress of the case. The arrival of the doctor is looked forward to by the sick man as the one cheering event of the day. Of course, the frequency should depend upon the gravity of the disease, and it can be overdone; but, it is better to make too many visits than too few. In the former case, the patient may think of his pocketbook, while in the latter he will resent being neglected. In this matter, the exercise of good judgment is called for.

Some years ago, during my absence on a vacation, the little son of one of my patrons fell and struck his forehead on the edge of a stone step. The spot puffed up in a few minutes to the size of a walnut, as such contusions will. It was a hurt for which in our boyhood our mothers

would have resorted to the camphor-bottle. However, a doctor from the vicinity was called in. He talked learnedly about concussion of the brain, put the boy to bed for a week, and visited him every day, even though after the first day the boy was as well as he ever had been in his life. The doctor sent in a charge for six visits, but, this the father refused to pay until it was cut down to less than half. The principal thing that the doctor got out of it was, the ill will of that family and their friends.

This man's mistake in judgment (or was it avarice?) reminds me of a young doctor who had settled in a country district and one day was going along the road to give himself the appearance of being busy, when he was hailed by a farmer working near the road. "Be you the new doc?" asked the farmer. The young man pleaded guilty. The farmer held out an arm with a highly inflamed spot on it and said, "What's that, doc?" The doctor inspected the spot with a wise air, thought he saw a case, and said: "Why, that's erysipelas." "Ery hell," spouted out the farmer, "a bumblebee stung me." That doctor went his way a humbler and a wiser man.

Patients differ greatly in their ideas as to what constitutes proper frequency of attendance. One will feel neglected if the doctor does not call often: another will want to make the decision himself as to when and how often the doctor shall come. The latter sort may need instruction as to the danger of neglect and the wisdom of allowing the doctor to be the judge of what is needed.

Here is my ideal family. About twenty-seven years ago, a man into whose house I had been called a couple of times said to me: "Doctor, I have a good many children and I should like to have a family physician upon whom we could depend at all times and whose charges would be within my means. I have not a large salary, but, I pay my bills every month. If, in view of prompt payment, you could afford to make me a special charge per visit, we should feel free to call you often, as sometimes we are a little at a loss to know whether an ailing child needs medical care or not and should be willing to pay for a visit to find out. You could also feel free to make visits as often as you thought necessary."

I cheerfully gave this man a liberal re-

duction, and that family is still with me, having been one of the most profitable and satisfactory on my list. They sometimes called me when it was not necessary, but, they always paid cheerfully for the satisfaction of knowing that there was no danger. We have come through times of great trial and danger together, but, they have always left it to my judgment as to when counsel should be called. I never needed to fear that meddling friends would undermine their confidence in me. Contrast the service, that such people receive, with that obtained by people that have several doctors in a year or even two or three in one illness.

Gloomy Prognostications

Some doctors, either from inborn pessimism or from the desire to magnify the greatness of the cure, get into the habit of exaggerating the seriousness of their cases and of giving gloomy prognoses. Most of us have met a specimen of this class. His cases of measles are all "black" measles—his diphtherias are always "black" diphtheria—his pneumonias all "double" pneumonia. He informs the family that it is fortunate they called him when they did: a little more delay, and it would have been impossible to save the patient: indeed, it may already be too late, but, he will "do his best." This is no fancy picture; I have run across the trail of this pestiferous windbag many a time. Pessimism in a doctor is, unfortunate, to say the least: however, wilfully exaggerating the gravity of a case is immoral, if not criminal.

A doctor ought to bear in mind that a cheerful, reassuring manner is one of his most potent remedies, while the opposite attitude may cancel all the benefit of his medicines. The patient should feel his courage renewed and strengthened after the doctor's visit. He ought to feel that, after all, things are not as bad as they might be. Even when a fatal outcome seems inevitable and the patient puts the direct question to the doctor, it is best, as a rule, to put the answer in some such form as this: "You are a pretty sick man and there is some danger, but, then, even very sick people often get well." This is perfectly true; we all can remember cases that seemed hopeless and, yet, the patient got well.

I, once, took a patient to a specialist. After the examination, the patient said: "Doctor, have I got an even chance?" The

brutal answer was: "No, you may live three months; certainly not more than six." That was seven years ago. The patient is alive and fairly well today, and (oh, irony of fate!) that doctor—he is dead.

Abandoning Hopeless Cases

Some doctors make the mistake of saying to the friends of a hopelessly sick patient: "I have done all I can for him. There is no use of my coming again." This is an exhibition of bad judgment. It adds to the despair of the patient as well as to the anguish of his friends. Not only is there the possibility of the doctor being mistaken, but, even when death is certain, his visits afford a moral support and comfort in life's most trying crisis. The gratitude of many a family has proven to me the soundness of this attitude.

The ignorant sometimes place us in an embarrassing position. The father of a little victim of pneumonia once said to me:

"Doctor, can you cure my boy? If you can not, I want to get a doctor that can." Had it not been for the sadness of the occasion, I should have been compelled to smile at such naive reasoning. It is not an easy matter to deal with a mentality so befogged with ignorance. I said to him: "You are at liberty to get another doctor, if you wish, but, stop and consider whether it is wise to swap horses while crossing a stream; whether it would be a help or a hindrance to your boy. How would you know that another doctor could save him? If a doctor said he could, how would you know whether he were telling the truth? A new doctor coming into the case would be at a great disadvantage. The wise thing for you to do is, to let me call a skilful man in consultation, so as to get the best from both of us." However, the man was afraid of collusion between us, in order to cover up my supposed mistakes.

[To be continued.]

2920 Warren Avenue.

The Reeducation of the Blinded Soldier

By EMMA KASPAREK ENGLAND, B. S.

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IN previous wars, it appears, the reeducation of men whose disability interfered with their return to their former occupations was not undertaken by any government. The training of disabled soldiers and maintenance of their families was left to the resources of the victims themselves; the only assistance rendered by the government being the allowance of small pensions.¹ Today, life in an "old-soldiers' home" is deemed an unworthy reward from a country whose citizens stood between the world's freedom and Prussian tyranny.²

During the Crimean war, about 0.65 percent of the soldiers were blinded; during the Franco-Prussian war, 0.86 percent; in the Russo-Japanese war, 0.22 percent. Owing to modern trench-warfare, however, from 5 to 8 percent of those that are wounded in the present war have eye-wounds.³

Everything that mind can conceive is

being done to bring together the blinded soldiers, in order to care for them and teach them to overcome their handicap, so that they may learn to be happy and useful members of society.⁴

The problem is new, and a new science of dealing with it is being brought into service. The literature on this subject is meager and scattered and much of it printed only in foreign languages.⁵

The French System for the Return of Blinded Soldiers to Civilian Life

No final plan has been reached by the French for returning blinded soldiers to civilian life. Existing social organizations have been unable to meet the needs created by the war. Public and private energies produced many new societies, but, their aims will be more advantageously fulfilled as the systems grow.

The laws which France passes for the return of her disabled are in harmony with the principles that underly her constitution;

¹Military Hospitals Commissions Bulletin, p. 80, May, 1917.

²Military Hospitals Commissions Bulletin, p. 3, March, 1918.

³Journal of the American Medical Association, Vol. 70, Feb. 9, 1918.

⁴Pamphlet: Sir Arthur Pearson's Appeal for Blinded Soldiers.

⁵American Journal of Care for Cripples, 5:95.

however, they are all subject to revision while the ideal is being sought after. Some of these new laws will be retained, some will be altered and some abolished. Whatever is best for the nation will eventually, be adopted. Information is sought from men and commissioners intrusted with the work, rather than from heads of legislative departments. Accuracy of knowledge of existing conditions will produce methods most suited for the purpose for which they are intended. The experience of France is important, inasmuch as it will aid the other allied nations.

All of France's disabled soldiers go through the following processes before they are returned to civilian life: (1) Active medical and surgical treatment; (2) functional reeducation; (3) furnishing of artificial appliances; (4) professional reeducation; (5) industrial establishment in civilian life.

Active medical and surgical treatment is received in special hospitals that have been established by private subscription or by military authority. After careful examination, the patients are operated upon, if necessary. By functional reeducation, is meant treatment of the part injured, so that it may react as nearly normally as possible.

Specially trained ophthalmologists care for the blind.⁶ Functional reeducation of the blind includes teaching the subjects to be cheerful, to be filled with hope, and to cultivate a proper outlook, for, depression incapacitates the man who fears he has become nonsupporting. The supplying of artificial limbs is a very serious problem. In cases where the eyeball has been destroyed, an artificial eye is fitted without delay, and these eyes are being made so perfectly that it is difficult to distinguish them from normal ones.⁷

Particular aptitudes and social circumstances fit blinded men for certain occupations. "General professional reeducation" is the term applied to the instruction that is given to disabled men in training them for earning a living. The State owes a soldier more than a pension in payment of its indebtedness to him—it must help him to find employment. Modern trench-warfare results in a large number of head injuries, because the head is more constantly ex-

posed than the body, and, consequently, there is a large number of partially or totally blind among the wounded.⁸

France called four million men to the colors, and about two thousand of them have been made totally blind. There are two large institutions for their reeducation. One is the "Maison de Convalescence" at Renilly, the other is "Le Phare de France", in the Rue Daru, Paris. The former was opened March 29, 1915. The minister of the interior erected it, but, it was partly under the guidance of the minister of war, because undischarged soldiers are received there.

Two and one-half francs (48.3 cents) is contributed by the State per man per day and the hospital-budget makes up the difference from a benevolent fund furnished by a society known as "L'enore des Amis Soldats Aveugles". This society recently received a gift of \$19,300 from South America. This organization presents to every man leaving the institution an outfit of tools for his new trade and also gives him a supply of raw material to start with, until he is able to purchase material with money brought in by his handicraft. It gives the man a "trousseau" or outfit of clothing, and presents him with 500 francs (\$96.50) should he get married, while all his wedding-guests are treated to cigars and coffee. Up to June, 1917, more than thirty men have married from the school. Raw materials are bought by the society, and it resells them at cost-price to the men after they are able to buy for themselves. Thus, for instance, it has just bought \$58,398 worth of brush fiber. Indeed, this society really adds the true "milk of human kindness" to the bare essentials provided by the State and this intelligent sympathy reacts upon the men, making them bright and joyous.

More than 233 beds are provided by this institution, while, in addition, it trains men that live in the neighborhood, so that, altogether, it cares for about 500 men. Over 300 have left it after being trained to make a living. The subjects taught are brush-making, basket-making, typewriting, piano-tuning, upholstery, fringe-making, cooperage, massage, and other occupations.⁹

Miss Winifred Holt, an American, who

6. American Journal of Care for Cripples, 5:8, No. 1.

7. Journal of American Medical Association, p. 361, Feb. 9, 1918.

8. American Journal of Care for Cripples, 5:19, No. 1.

9. Monthly Review of Bureau of Labor Statistics, Vol. 4, June, 1917.

devoted herself to the care of the blind in the United States, founded the other hospital, the Phare de France, on August 18, 1916. This Paris "Lighthouse" is established in a large and pleasant dwelling, in the fashionable quarter of Paris. An influential committee in America supplies funds for maintaining this institution.

For some years previous to the war, a good monk—the Abbé Moreau—had trained blind workers in an old church in Bordeaux. He taught the men to cane chairs, and he was so devoted to his pupils that he sold everything he had, including even a highly prized collection of butterflies, in order to meet the expenses of the school. Miss Holt discovered this good monk and resolved to give him assistance. She sent to New York for funds and requested him to accommodate the men blinded in battle. Enough funds were sent to buy an old chateau surrounded by beautiful grounds rich in yew-trees, old rose-bushes, with a statue of Jeanne de'Arc in the midst of the flowers. The Abbé changed the name of his establishment to "The Bordeaux Lighthouse". In addition to resident pupils, day students follow the entire day's program, and a few men attend special classes.

This work, with its modest beginning at Bordeaux, spread rapidly. Home-teaching and classes at Hotel de Crillon in Paris followed and a gift of 30,000 francs was given to other organizations working in the interest of the blind. The work progressed and then the government offered the Phare de France, which is rented from the Pope, making but one stipulation, namely, that English and Belgian soldiers be accepted, as well as the French.

The president of the Republic, the American ambassador, and the ministers of war, of marine, of the interior, and of public instruction accorded the work their patronage. Among the subjects taught at the Phare are braille, typewriting, and stenography. The blind are so interested in this commercial course that they would prefer to miss a theater to missing a lesson.

There is also an arts and crafts school, and it is very popular. A stable was converted into a workshop, where the men weave, operate knitting-machines, and a printing-press. Clay modeling is a favorite subject, because it educates the sense

of touch. The men have modeled beautiful pottery and statues. Every morning the men get gymnastic training. Various entertainments are given at the Theater of France, and the men are offered some of the best seats every week.

Very often a man's confidence is won through games and amusements. Miss Holt tells the following story: Recently I was taken by an American ambulance-doctor to a patient from Verdun. He had lost his sight, his right arm, and was otherwise wounded. All I could do was, to talk to him, at the doctor's request, and to give him an idea of light through work. On my second visit, I introduced him to an American checkerboard adapted for the blind. He consented to play with me, and he finally beat me in a game. He was so pleased at this success that all his boyish sense of fun returned, and he giggled with glee until the nurse was afraid he might reopen his wounds. He now is learning braille and a few other simple subjects and is a regular pupil of our home-teacher.

The head of the Lighthouse staff is a French gentlewoman. Five of the professors are, themselves, blind. Two teachers of music were blinded at Arras. The rest of the teaching force can see. Two French physicians give the men necessary physical attention. The home-teachers visit the homes and hospitals when the doctors report the news about additional blinded heroes, and they first cheer them up, then persuade them to come to Paris for training. One man whom the nurses found crying like a child actually laughed at the idea of his being able to become a wage-earner and to marry the girl who had remained faithful to him. One man returned to his retail business after six months of training and is able to write his letters and keep his accounts. Another man became an expert machine-knitter after two months' training.¹⁰

A number of blinded men are employed on farms—milking cows, digging potatoes and beets, and so on.¹¹ One man wrote to Miss Holt as follows: "I should like to be a poet, to be able to sing to you of my rebirth; but, alas, I am neither poet nor writer, only a peasant. Thanks to you and the good teachers about you, I can say, without exaggeration, that I feel glowing within me

10. Survey, p. 43, Oct. 14, 1916.

11. Journal of American Medical Association, p. 227, Jan. 27, 1917.

a light that throws its rays into the closed chamber of a spirit that I believed would forever live in darkness. At the Lighthouse of France, I have found the light."

That Miss Holt is held in high esteem, is demonstrated by the fact that the president of the Republic visited her and gave her permission to take into her hospital any blinded soldiers she may find in any hospital. Visitors leave the Phare feeling that they have been to a party at a social center, rather than at a school for the blind.

The pupils bring in their friends to tea as they would in their own homes. The visitors are given a hearty welcome and spend a merry hour listening to music and laughter. The pleasant atmosphere is due to "Miss Holt's long experience with the blind and to her own sunny and energetic temperament, which diffuses cheerfulness and vivacity wherever she passes."

The work of Miss Holt supplies a need nowhere else met in France, whereby the blind that require it are taught to be occupied in a sort of leisured way, rather than

being trained to a workingman's environment. A wider range of subjects is taught, and some of them partake of an unusually artistic nature for such an institution; as, for example, artistic pottery is being stenciled by the blind, and mathematics, music, foreign languages, and weaving on elaborate looms are part of the instruction.¹²

The total number of soldiers blinded in war in France, up to 1916, is given as 3,000. Their pension is 1,200 francs a year, while, by working, they can earn 5, 6 or even 8 francs a day. Baskets are being made in vast quantities and varieties, to supply the demand; for, previously, the basket-ware came from Germany. The making of brushes is divided among specialists, each of whom attends to a particular part. This is a distinct advantage to the blind, because each one masters his part of the brushmaking quickly. In the ironworks industry of one of the shops, 25,000 parts of automobiles are being made by these previously helpless men.¹³

[To be continued.]

The Offending Organism in Diabetes Mellitus

Preliminary Communication

By WM. L. FRAZIER, M. D., Boise, Idaho

EDITORIAL COMMENT:—Is Diabetes mellitus a bacterial disease, due to a definite diabetes microorganism? Doctor Frazier believes that it is, and that he has discovered the specific virus. While his chain of evidence is not yet complete, the data presented here are interesting and merit our attention.

FOR a number of centuries, the clinical picture of diabetes has been rather well set forth. Arethæus, in the first century, described its clinical symptoms almost perfectly. In the seventeenth century, attention was called to the peculiar odor and sweet taste of the urine. A few decades later, it was discovered that, if diabetic urine was evaporated down, it contained much more solid material than normal urine. For a time, this solid material was thought to be only an increase in the amount of salts normally found in the urine. Shortly after, this residue was

analyzed and determined to be sugar. In another century or so, it was determined that the form of sugar in diabetic urine was grape-sugar. Still later, it was shown conclusively that diabetic serum contained sugar. Later still, it was demonstrated that normal blood contained grape-sugar, but, that blood of diabetics contained a greater amount of sugar than does normal blood. Still later, Bernard showed the origin of the blood-sugar to be derived from the ingested carbohydrates; he also definitely linked diabetes and carbohydrate-metabolism.

Recently, there has been much work done analyzing diabetic blood, comparing

12. Survey, p. 43, Oct. 4, 1916.

13. Medical Record, p. 527, Mar. 23, 1918.

it and normal blood, and the relation of these amounts to the amount of sugar in the urine. Also much conjecture has been advanced as to the oxidation of the normal amount of sugar in the blood and the lack of oxidation of diabetic amounts.

With each change in theory as to the causes of diabetes, the treatment has changed, although for the most part it has, during the past century, been directed toward the clearing up of the one symptom, the removal of sugar from the urine. This reduction has been effected by several ways, all of which, though, are detrimental and not of any benefit to the patient. These methods include violent muscular exercise, neutralizing the adrenal output, neutralizing the thyroid secretion, the injection of foreign protein, and by starvation.

In the year 1911, I drew the conclusion that diabetes is an infectious disease. I came to this conclusion, because I had observed so many families presenting more than one case and also because it so frequently occurred in people associated with, yet, not related to diabetics.

Having decided that diabetes is produced by some certain organism, I set forth to isolate the offender. Not knowing where to look, a systematic search instituted consumed many months before finally proving successful. At last, though, the organism has been isolated in my laboratory, and it is proper to say that most of the work, and the most efficient portion of it, has been done by my very skilful laboratory helper, Miss Anna Penrod. Because of her efficient work in the isolation of this organism, I am giving it the name of the Frazier-Penrod bacillus.

The Frazier-Penrod Bacillus of Diabetes

The bacillus which I believe to be the organism that produces diabetes is found in the blood, both within and without the red cells; though only about 10 percent are found out of the cells.

By making a smear on a glass slide, just as you would in examining for malaria, and staining it with the Romanowski solution, the bacilli are easily found. They are rather heavy rod-shaped, though some are much smaller than others. In many of the red cells, they can be seen in the process of division. We have been able to find them in every one of the many cases of diabetes to which we have had access since we first

identified the germ. We have also been able to find them in two patients who had no glycosuria, but, who showed the general symptoms of diabetes (or, more properly said, the symptoms of acidosis); thereby leading me to believe that one may have the infection long before the presence of sugar in the urine is detectable, the anabolic handling of carbohydrates not being sufficiently interfered with to cause it to be eliminated as sugar. These two persons had been intimately associated with other diabetics.

We have been able to isolate the bacillus by growing it in bouillon and transferring it onto agar. (For these cultures, methylene-blue is the better stain.) It grows prolifically in bouillon. We have grown bouillon-cultures in many cases without contamination. It also grows well on nutrient agar, is acid-forming, and does not ferment glucose. Other characteristics of the Frazier-Penrod bacillus are: it is motile, Gram-positive, not gas-forming, grows in chains of two and up to many (ten or twelve), and is spore-forming.

The most probable mode of infection is through the bedbug, possibly through the mosquito, flea or some other insect.

Now, that the offending organism has been found and isolated, there is certain to be a revolution in the treatment of diabetes. However, I would warn against impulsively adopted measures. There already have been too many ineffective cures thrown upon the diabetics. They are drowning people who will grab at a straw. Let us not throw them straws to grab and go under with when they can be offered a lifeboat.

Finally, my reasons for believing this bacillus to be the causative organism of diabetes may be summarized as follows:

The Frazier-Penrod bacillus is found in the blood of all diabetics that I have examined—these being fifty-nine. In culture-characteristics, it does not conform to any other organism described by any bacteriologist. In relieving the diabetic of this organism, the sugar, neuritis, thirst, polyuria, and all other diabetes symptoms disappear, in some cases, the subjects having been free of these symptoms for over four years.

Other culture, inoculation, and treatment tests are being carried out and will be published later.

The Dakin Chlorine-Carrying Antiseptics*

By ALFRED S. BURDICK, M. D., Chicago, Illinois

THE Great World War, in which our country is now taking an active part, has brought to the medical, chemical, and pharmaceutical professions problems of a magnitude and importance transcending any which these professions have been called upon to deal with in modern times. It is much to the credit of modern science that it has been able to solve these problems as well as it has. In spite of the fact that more than twenty million men have been called into military service, many of them being compelled to live under the worst possible sanitary conditions—conditions which only a few years ago would inevitably have caused almost unbelievable loss and suffering, as a consequence of infection following the injuries of war—the death rate, apart from deaths directly due to wounds, has been almost unbelievably small. There have occurred no great epidemics in Europe. Typhoid fever has almost entirely disappeared. In western Europe, there has been no cholera and no typhus, although these have prevailed to some extent in eastern Europe. The recoveries from wounds have been fully ninety percent.

The problems with which the medical profession has to struggle have been, in many respects, new problems, largely determined by new methods of warfare, particularly by the life in the trenches and the character of the *milieu* in which the contest is principally waged. The soil of northern France is one of the most fertile in Europe, this fertility depending very largely upon hundreds of years of intensive fertilizing. The ground is saturated with the fecal deposits of animals and before the war had raged for many months it was further contaminated by the excretions of millions of soldiers and by their dead bodies. Early in the war, as a consequence of these conditions, the problem of wound infection and of diseases growing out of this condition, plus insect contamination, exposure, and exhaustion were the most in evidence. Then a new crop of diseases appeared, including such little-known or uncommon conditions

as trench-fever, trench-nephritis, tetanus and gas-bacillus infections. In most of these, wound infection was the fundamental cause.

The importance of combating wound infection, therefore, was fully appreciated by surgeons at the front early in the war. It was in response to this demand that the Rockefeller Institute, of New York, sent a group of investigators to France to study the problem. This party was headed by Dr. Alexis Carrel. Associated with him, but, at that time, less known to the scientific world, was a chemist, Dr. Henry D. Dakin, of the Herter Laboratory. At this time, practically every wound was infected by the time it reached the surgeon, and in many instances was badly infected—this as a consequence of the fact that the wounded were left on the field for hours and sometimes for days before surgical attention could be given them. Consequently, the mortality among the wounded was very high.

This problem was attacked, from the surgical side, by Doctor Carrel, while the chemical phase was handled by Doctor Dakin. The result of the joint work of these two men was, first, the development of a new method of treating infected wounds, the contribution of Doctor Carrel, and, second, the development of a new series of antiseptics, for which the world is indebted principally to Doctor Dakin.

The Carrel Method of Wound Treatment

Prior to Carrel's work in this field, it had become almost an axiom that drainage must be provided for every wound. The novel feature of the Carrel method is, the rejection of this doctrine. The wounds which Carrel was called upon to treat were very largely deep, jagged ones, filled with dead and dying tissue, soaked in wound secretions, and often filled with dirt. To sterilize them by the old methods, was impossible. Thus it was that Carrel conceived the idea of making every wound a well and, instead of draining it, to keep it constantly filled with an antiseptic fluid. This he accomplished by means of a system of intermittent irrigation. From a reservoir, an antiseptic fluid is conducted

*Read at a meeting of The Prescott Club, University of Michigan; June, 1918.

through minute tubes into all parts of the wound. These tubes are surrounded by gauze, so as to keep the wound open and permit of the free access of the fluid to its most remote corners. This fluid is renewed at frequent intervals, to assure constant germicidal action.

The most difficult problem was, to find an antiseptic that would be germicidal enough to effect the destruction of the microorganisms and at the same time not be harmful to the tissues or produce poisonous results upon absorption.

The task of finding such an antiseptic was assigned to Doctor Dakin.

The Choice of an Antiseptic

Doctor Dakin investigated a very large number of antiseptics, finally settling upon the hypochlorites as best suited to meet the indications laid down by Doctor Carrel.

The first result of these studies was, the introduction of a solution of sodium hypochlorite—which, as produced by various formulas, has come to be known as Dakin's solution. This solution, as first employed, consisted of a 0.5- or 0.6-percent solution of sodium hypochlorite, prepared by dissolving a mixture of sodium carbonate and a high-grade quality of ordinary chlorinated lime in water, agitating thoroughly, syphoning off the clear liquor, and lastly adding boric acid to the clear filtrate. At about the same time, Lorraine Smith, of the University of Edinburgh, introduced a somewhat similar solution, which he called eusol. This, however, consisted of equal parts of bleaching-powder and boric acid alone, dissolved in water, and finished by filtering.

Since the introduction of these original solutions, many changes have been made in the composition of "Dakin's solution". The formulas suggested are too numerous to mention here, while the methods of preparation are equally varied. The solution most in vogue at the present time is Daufresne's modification of the Dakin solution. Without attempting to go into details, I would say that this is prepared by treating chlorinated lime with sodium carbonate, as described by Dakin, neutralizing, however, with sodium bicarbonate instead of with boric acid. By Daufresne's process, no caustic soda is formed, the solution containing, it is alleged, a small amount of carbonic acid, which attaches itself feebly to

the lime as soon as the two solutions come in contact and decomposition occurs.

With a solution made in this way, wound irritation is much less likely to occur than with the older forms. However, to avoid irritation, the solution must not contain to exceed 0.45 or 0.5 percent of sodium hypochlorite. The method of manufacture of Dakin's solution by the Daufresne method is somewhat involved and requires considerable technical care. That it is germicidally effective, there can be no doubt. It is particularly important that the solution should be neutral or at least as nearly so as possible. Thus, in his "Handbook of Antiseptic," Dakin says:

"It is most important to test the solution for free alkali by adding a trace of solid phenolphthalein to a little of it. In case a red color develops, indicating free alkali, the solution may still be used if it is previously neutralized either by passing carbon dioxide through the solution or by adding a little boric acid, until the alkaline reaction is abolished. But, in making further quantities of the solution, using the same sample of bleaching-powder, alkalinity may be avoided by reducing the quantity of sodium carbonate and correspondingly increasing the bicarbonate.

"Sodium hypochlorite, whether prepared according to the preceding formulas or according to other methods that will occur to the chemist, e. g., from salt by electrolysis (l. c., p. 116) or from liquified chlorine gas, when used in neutral solution at 0.5-percent concentration, is found to be a valuable antiseptic for the treatment of infected wounds. Its action is extremely rapid and then ceases as soon as all the hypochlorite is decomposed; hence, the methods for using the solution efficiently must be provided for its frequent renewal."

The advantages of sodium hypochlorite, in solution, briefly are as follows: It acts with exceeding rapidity. When used in proper solution, it does not irritate the tissues. It is only slightly toxic. It causes rapid dissolution of necrotic tissue—a fact of considerable importance in treating badly infected war-wounds. It is admirably adapted for the intermittent instillation method of Carrel.

The disadvantages of the hypochlorite solution are: (1) The exceeding rapidity of its action, the germicidal power being

rapidly exhausted; (2) The fact that it can be employed only in weak solution, the limit of strength being 0.5 percent. Used in greater concentration, it causes irritation, particularly of the skin. (3) Its solutions are relatively unstable. While improved methods of manufacture have been introduced, nevertheless, hypochlorite solutions generally are quickly decomposed in the presence of light, although more slowly when kept in the dark.

On account of the instability of sodium-hypochlorite solutions, Dakin began to go more deeply into the problem of the chlorine-carrying antiseptics while he was in France, associated with Carrel. As a result, he arrived at the conclusion that the antiseptic action of the hypochlorites is dependent, not so much upon free chlorine or hypochlorous acid, as upon the formation, when in contact with proteins, of combinations of nitrogen and chlorine of the general formula of NCl . And this led him to a study of a series of synthetic substances carrying this molecule (NCl) which were first described by Chattoway, about thirty years ago, under the name chloramines.

The Chloramine Compounds

The first of these taken up by Doctor Dakin was, toluene-para-sodium-sulphochloramide, described by him under the name of chloramine-T. This chemical was introduced in America by The Abbott Laboratories under the name of chlorazene. It is a crystalline substance possessed of a faint chlorous odor and a slightly bitter taste. It is very freely soluble in water, a saturated solution at room-temperature containing about 15 percent. It is a synthetic coaltar derivative, originally made from toluol, while commercially it is prepared from para-toluene-sulphochloride, a by-product in the manufacture of saccharin.

Chlorazene (as I shall call this compound hereafter) has substantially the same germicidal power, weight for weight, as sodium hypochlorite. It is a matter of interest, in view of the fact that it contains only half as much chlorine as does sodium hypochlorite, that, molecule for molecule, chlorazene is four times as germicidal as the hypochlorite. This peculiar phenomenon is explained, according to Dakin "by the fact that the chlorine is already linked to nitrogen" in the chlorazene, while the linking

with the hypochlorite takes place only after it comes in contact with the wound.

Advantages of Chlorazene

Chlorazene possesses certain very marked advantages, which may be enumerated as follows:

1. It is decidedly less irritating than the hypochlorites. The latter, as already explained, can be advantageously used in the treatment of wounds in a concentration of not to exceed 0.5 percent, while chlorazene can be employed in much stronger solution, and is largely employed in a strength of 1 percent, 2 percent; and even as high as 4- and 5-percent solutions have been used in cases of emergency. Under ordinary circumstances, however, a solution ranging in strength from 1 : 1000 to 1 : 100 ordinarily covers the indications. This, it will be seen, gives a wide range of concentration, thus making it available for the treatment of all classes of wounds.

2. Chlorazene is very stable, both in the form of powder and tablets. In solution, it is decomposed in the presence of bright light; if kept in the dark, though, solutions may be preserved much longer than the corresponding hypochlorite solutions. However, in powder or tablet form, the substance may be kept indefinitely in any climate and under practically all conditions without likelihood of any noteworthy change taking place.

3. The action of chlorazene is less explosive and more prolonged than that of the hypochlorites. This renders it more suited to general use, as an antiseptic, than sodium hypochlorite, which latter, while its action is very powerful, exhausts its germicidal virtues very quickly. Consequently, applications of chlorazene may be made at much less frequent intervals than with the corresponding hypochlorite.

4. As Dakin points out in his "Handbook," chlorazene is less irritant to tissues than are hypochlorite solutions. This is important, because, as Dakin says, "the ideal surgical antiseptic should effect complete sterilization within its sphere of action without causing any damage to animal cells." Furthermore, the chlorazene is virtually nontoxic. There is no danger of poisoning from absorption, while, if any of the solution should inadvertently be swallowed, no harm other than slight irri-

tation of the stomach is likely to supervene.

Having a very personal interest in chlorazene, I have on several occasions asked Doctor Dakin in what respects the hypochlorite is superior, and in what the chlorazene is the superior antiseptic. In each instance, he has stated that in every way he considers chlorazene superior to the hypochlorite, except in this one: The hypochlorite exerts a most remarkable proteolytic action, meaning, that it destroys dead animal tissue very rapidly. This is of great importance when the wound treated is one presenting a large amount of necrotic tissue, thus making it peculiarly valuable in the treatment by the Carrel method. In every other respect, the chlorazene is the superior antiseptic.

In civil practice, chlorazene is the water-soluble antiseptic and germicide of choice. In civil practice, we rarely meet the profoundly devitalized wounds, with enormous amounts of secretion, such as were met with early in the war. As a matter of fact, these wounds are now seen at the front much less frequently than they were early in the war, because of the improved methods of handling the wounded, so that now, as a rule, they come into the surgeon's hands within a few hours after the wounds are inflicted.

A preparation of chlorazene that is warmly recommended by Carrel, and which he is using extensively, is a paste containing 1 percent of chlorazene in a base of sodium stearate. It is offered to the profession by The Abbott Laboratories under the name of chlorazene surgical cream. This paste is employed by Carrel as an application to wounds that are not intensely infected or in which the infectious organisms have been largely destroyed by the irrigation method, so as to keep the part in an aseptic state. It is now his practice to close up many wounds of this character after application of the paste to their interior.

Chlorazene has been placed on the market in a number of ways: in the form of crystals and of tablets, as chlorazene surgical cream, and as chlorazene dusting powder.

Dichloramine-T

About a year ago, Dakin and his associate of the Herter Laboratory, Doctor

Dunham, introduced to the profession another chloramine, under the name of dichloramine-T. This compound contains a larger percentage of chlorine than any of the antiseptics heretofore introduced, to wit, 29.5 percent. Dichloramine-T is the abbreviated name of toluene-para-sulphondichloramide. It is a yellowish-white crystalline substance, of sweetish, rather pungent chlorous odor. The appearance of the salt differs somewhat according to the method employed in its manufacture. Thus, when it is crystallized out of chloroform, the crystals are quite large and of a decidedly yellowish cast. As ordinarily manufactured, it is microcrystalline and has only a faintly yellowish tinge. It is insoluble in water, but, soluble in certain oils.

A large amount of work has been done by Dakin and Dunham, as well as others, on the problem of solvents for dichloramine-T, which, on account of its exceedingly powerful germicidal activity (in which respect it seems to be far more potent than any germicide heretofore introduced), promises to prove one of the most important contributions to the list of antiseptics introduced as a consequence of the war.

The first solvent for chloramine-T introduced was chlorinated eucalyptol, the eucalyptol being chlorinated for the purpose of insuring a reasonable permanency of the solution. As a diluent, a chlorinated paraffin oil was employed. These substances were both introduced by Doctor Dakin. An improved method of chlorinating the eucalyptol has been described by Lewis and Krauss, of The Phipps Institute.

The most serious objection to the eucalyptol as a solvent was the readiness with which solutions of dichloramine-T in this preparation undergo decomposition. Such solutions are extremely sensitive to light, heat, moisture, and various organic substances (alcohol, for instance), and when as a result of adverse conditions the dichloramine-T is decomposed, with precipitation of an amide, there is formed free hydrochloric acid, with, consequently, wound irritation. It was found, however, that stock solutions of dichloramine-T in eucalyptol can be made up, and that these will preserve their activity and not undergo decomposition for about a month if kept under favorable conditions. Further, when

the chlorinated paraffin oil is added as a diluent, the solution will decompose in three or four days. Another objection to the use of the eucalyptol was found to be its pungency, which made it disagreeable in nasopharyngeal work, while, also, in itself, it causes irritation in some sensitive skins.

Quite recently, Doctors Dakin and Dunham have introduced a new solvent for dichloramine-T which seems to be the ideal solvent. This substance is a chlorinated hard paraffin wax of a melting-point of 50° C. or higher. (This is the ordinary low-melting-point paraffin wax of commerce.) When a stream of chlorine gas has been passed through this melted wax at a temperature of 120° to 140° C., the product becomes a straw-colored, odorless, tasteless liquid, which in itself, is nonirritant to wounds. In this process, it takes up about 30 percent of chlorine gas, and the resultant liquid has a specific gravity, on an average of 1.040. This new solvent Doctor Dakin has called chlorcosane, and it is marketed under this name by The Abbott Laboratories.

Solutions of dichloramine-T in chlorcosane are quite permanent; that is to say, under favorable conditions, they will keep for from one to two months without showing notable decomposition; also, they are much less likely to produce irritation than will the eucalyptol solution.

Heretofore solutions of antiseptics in oil have not found favor with surgeons, because it has been believed that intimate contact of the antiseptic with the infected matter is hindered by the oily coating. According to Dakin, however, this objection does not pertain to the dichloramine-T oil-solutions, since "the partition-coefficient between the oil and the water is such that a certain amount of the dichloramine-T passes into the water and there exerts its germicidal action." In other words, the oil simply serves as a reservoir from which the antiseptic is given up gradually to the tissues.

Dichloramine-T has already been very extensively used both in civil and in military practice. In this country, Dr. W. Estell Lee, of the Pennsylvania Hospital of Philadelphia, has employed it in more than ten thousand cases, with results that, as reported, certainly are startling. It has also been used in several thousand cases, in France, by Captain Joshua Sweet, with

results equally satisfactory, and in some respects even more surprising.

As stated, dichloramine-T is not water-soluble, and, hence, must be used solely in oil solution. For the treatment of wounds, it is usually sprayed upon the wound with an atomizer, although a medicine-dropper, swab or grooved director may be employed to bring it into every part of the wound. In the case of deep wounds, the solution, if desired, may be poured. When the antiseptic can thus be brought in contact with the part, it seems to destroy the microorganisms (or at least to check their multiplication) almost immediately. I have seen many foul, angry, inflamed, and suppurating wounds treated with this germicidal agent, and the startling thing about them is that they virtually always seem to be clean within forty-eight hours.

Dunham has done a good deal of work with dichloramine-T in meningococcus-carriers. It seems to have the power of destroying the meningococcus-organism in the nose and throat. As doubtless you know, meningitis is now believed to be transmitted by the nasal secretions. It is rather too early to give conclusions as to the exact usefulness of this agent in this field. The evidence would seem to indicate that it will be one of the most potent remedies at our disposal for sterilizing the nasopharyngeal passages. Flexner, of the Rockefeller Institute, has reported favorably upon it.

Recent reports by Woolley, and by McCord, Friedländer and Walker, giving experiences at army camps, have established the great prophylactic value of dichloramine-T, not only against meningitis, but, also, for diphtheria, measles, and pneumonia. At Camp Sherman, diphtheria carriers were treated with gargles made up of a 0.25-percent solution of chlorazene and followed by spraying with dichloramine-T in chlorcosane. Excellent results were obtained from this treatment.

Halazone for Sterilizing Drinking Water

I will refer only briefly to halazone, a substance which also belongs to the chloramine group, and which was introduced by Dakin for sterilizing small quantities of water. On a large scale, chlorine or chlorinated lime are used in many cities for sterilizing their drinking-water. The halazone has the advantage of affording a stable

form of chlorine, in tablet form. Chemically, it is para-sulphon-dichloramino-benzoic acid. In other words, to the chloramine, a benzoic-acid molecule has been added. In the tablet, a small amount of sodium chloride and sodium carbonate or sodium borate is added. When the tablet is dissolved in water, it decomposes, with the formation of free chlorine. One tablet, containing 4 milligrams (1-16 grain), will sterilize one quart of water. Halazone is effective against the typhoid, cholera, dysentery, and other water-borne organisms in a concentration of 1 part in 250,000. Water thus treated is virtually free from taste and odor.

Germicidal Power of the Chloramines

There are so many ways of determining the germicidal power of antiseptics that the man who attempts to study this side of the problem in a cursory way is likely to get into deep water. Apparently no two men agree as to standards to be employed. It is one thing to destroy organisms in the test tube and quite another thing to destroy them in a wound, a felon, a carbuncle or the throat. Furthermore, germicides are affected by temperature; the higher the temperature, for instance, the more readily they act. The same is true in the body as outside of it. Also, much depends upon the period of contact, the frequency of application, the presence or absence of coagulant action, the presence of blood or of considerable secretion or of necrotic tissue. For a very interesting study of the problem, I would refer you to Dakin and Dunham's "Handbook of Antiseptics," published by Macmillan.

The simplest method of testing germicidal potency, and one which has long been widely in use, is, to determine the phenol-coefficient (that is, the relative germicidal power of the antiseptic to be tested) upon microorganisms (usually the bacillus typhosus) for a certain time-period, or, about 21-2 minutes, tested in a standard. This method of testing, while it has been endorsed by the government, through the Hygienic Laboratory of the Public Health Service, is being much criticized. According to this method, however, chlorazene has been found to have a phenol-coefficient of about 50; in other words, weight for weight, it is about fifty times as germicidal as carbolic acid. This would mean that a 5-percent solution of phenol would be

equal in antiseptic power to about a 1 : 1000 solution of chlorazene.

The Hygienic Laboratory method is based upon a short unit of time. Dakin and Dunham believe that the only satisfactory way to follow the speed of disinfection is, to determine the progressive change in the number of bacteria in a suitable mixture after varying periods of time. They have conducted a series of experiments in this manner, using as a culture-medium a mixture of equal parts of blood-serum and muscle-extract; this being selected in order to simulate in a convenient way the chemical character of the wound secretion. This medium is inoculated with staphylococcus aureus. Then the total number of organisms present in the mixture is determined. Finally, the antiseptic is added, and the length of time required to destroy the contained organisms is determined by tests at different intervals.

Quite a series of experiments was conducted in this way, with a variety of antiseptics. It is interesting to learn that, under the same conditions, chlorazene is distinctly more effective than an approximately equivalent amount of chlorine in the form of sodium hypochlorite or hypochlorous acid. More powerful still is dichloramine-T in oil—in fact, the latter was found to be incomparably more powerful than any other germicide thus far available.

The most startling facts were revealed by a comparison of the chlorine-carrying antiseptics with the standard germicides, so called, such as mercuric chloride, phenol, and the silver salts. The results obtained are succinctly reported in a paper by Dr. E. K. Dunham, contributed to *Surgery, Gynecology, and Obstetrics*.

Doctor Dunham states that chlorazene will do in five minutes and dichloramine-T in one-half minute what mercuric bichloride will not do in three hours or carbolic acid in twenty-four hours. Both chlorazene and dichloramine-T are many times as germicidal as silver nitrate, argyrol, the cresols, hydrogen peroxide, to mention only a few.

A 2-percent solution of phenol failed to sterilize the mixture in twenty-four hours. Mercuric chloride (1 : 1000) accomplished the same degree of disinfection in three hours and completely sterilized in seven. Acriflavine, a dye recently introduced as an antiseptic (3 : 1000) killed all the bacteria in about nine hours. In very sharp

contrast to these antiseptics, the members of the chlorine group were extremely rapid in their action. Sodium - hypochlorite (Dakin's solution) of 0.5-percent strength, completely sterilized in four minutes; chlorazene (2-percent), in five minutes; dichloramine-T (2-percent in oil solution), in less than thirty seconds.

The Pharmacy of the Chloramines

The pharmacy of the chloramines is now being studied; however, much work remains to be done. Perhaps it is sufficient at this time to emphasize the desirability of combining chlorazene and dichloramine-T with other substances just as little as possible. Both are extremely reactive and enter into combination quickly with most inorganic and many organic substances. Chlorazene, for instance, is incompatible with all acids, with alcohol, and with most metallic substances. It tarnishes most metals, although slowly. It acts quite rapidly upon iron and copper, slowly upon silver, and only slightly upon tin.

A 1-2-percent solution of chlorazene containing 5 percent of alcohol, lost 2 percent of its strength in forty-eight hours, and about half its strength in one month.

A mixture containing chlorazene, a little menthol, and 0.5 percent of alcohol lost only about 5 percent of its strength in three months. A solution containing 1 percent of sodium bicarbonate remained unchanged after three months. A solution containing only a little cinnamon-water lost about 8 percent in three months. As a rule, the percentage-content of chlorazene was not affected by saccharin, and only slightly by cinnamon-water, mint-water, and other flavors. It became decomposed in the presence of tragacanth, while glycerine caused very rapid decomposition. A mixture containing alcohol, soap, and distilled water lost all of its strength within a few days.

In solid form, combinations containing calcium carbonate, borax, sodium bicarbonate, magnesium carbonate, zinc stearate, and milk-sugar, remained fairly permanent. The addition of soap caused rapid decomposition.

Dichloramine-T is even more reactive. There are only a few substances with which it can be combined. As already stated, this subject now is being closely studied, and a full report of this work will be published at some subsequent time.

The Treatment of Chronic Diseases

Diseases of the Nervous System

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Continued from September issue, page 680

Epilepsy

WHILE it is extremely doubtful, in my opinion, whether epilepsy ever is purely reflex in character—that is to say, the sheer result of cerebral reaction to a peripheral point of irritation—yet, it unquestionably is true that epilepsy frequently is aggravated by such peripheral conditions; and, what is more to the point, the deficient nerve-force of the epileptic often is depleted by the continual drainage of nervous energy at peripheral places of leakage. Hence, one of the first cares of the physician, in treating epilepsy, should be, to seek out and remove every such source either of excessive irritation or of nerve depletion.

The most common and fruitful sources of peripheral aggravation are, in order of

their frequency, the gastrointestinal tract, the nasal passages, and the eyes. Thorough and exhaustive examination, therefore, should be made of the entire body of the patient, from head to foot, for any possible focus of reflex disturbance, with special reference to the three localities mentioned; bearing in mind that very slight peripheral irritations that in the otherwise healthy person would cause no disturbance may so nag at the deficient nervous system of the epileptic as to precipitate seizures and to prevent possible recovery from the malady.

Thus, the refraction of the eyes should be carefully tested and the most trivial errors properly corrected; the rhinopharyngeal region should be thoroughly inspected for polyps, adenoids, enlarged turbinates, spurs, deflections, sinus inflammation, diseased tonsils, and so forth, and these, if

discovered, should be promptly removed; also, the entire gastrointestinal tract, from the mouth to the anus, should be canvassed for evidence of decayed teeth, gastric hyperacidity, perverted metabolism, constipation, worms, spastic sphincters, colitis, and any other of the thousand and one disorders of function that cause a drain of the nerve-energy, and to the extent that any of them may be present they should receive attention. All of which should be supplemented by a complete urinalysis and an exhaustive examination of the genito-urinary organs, with a similar end in view. Phimosis is a frequent aggravation in boys and a hooded clitoris in girls.

Having cleared out of the way, so far as possible, all of these focal obstacles, the next important step is, to see to it that the patient is put upon a rigidly simple and elementary regimen of hygiene and dietetics. All, or virtually all, epileptics are gourmands, who eat too much and eliminate too little; and in many instances this is a worse factor in the patient's condition than the epilepsy itself. At all events, no epileptic can, possibly, get well under such conditions. There is but one principle upon which to base an epileptic's diet, and that is, to allow only the minimum of food consistent with the maintenance of reasonable nutrition and (in the case of children) growth, and this of the simplest, most easily digested and eliminable kind. It should be a mixed diet, of which the vegetable content should be the predominant element, with plenty of fresh water, a moderate amount of buttermilk, and citrous fruits and juices. Sweets, pastries and other indigestible things, should, of course, be strictly forbidden. Otherwise, the important point is not so much the *quality* as the *quantity* of the food, which, as stated, should be the least amount with which the patient can get along comfortably.

While attention thus is given to the intake, equal care should be exercised as to the elimination. Epileptics almost always are constipated, and, while a proper regulation of their diet will do worlds to correct this baneful condition, it usually is necessary, at least for the first few months of treatment, to institute some active measures to induce free movement of the bowels. In the main, it is better to employ agencies other than drugs, if practicable. Modulated exercise (especially walking), massage of

the abdomen, electricity over the bowels, and hydrotherapy, in the form of hot and cold applications to the abdomen are all better than medicines. But, if these can not be systematically carried out, then it is well to give some mild and harmless cathartic that will stimulate the peristalsis of the bowel and at the same time act as an intestinal disinfectant. Perhaps the best combination for such an effect is that of sulphur, phenolphthalein, and a little atropine or strychnine, or both. This may be given in pill form and taken at night, followed in the morning by a laxative saline. Even when physical measures are employed for moving the bowels, it is well to prescribe a little sulphur and phenolphthalein, occasionally, in order to keep the intestinal tract clinically aseptic.

Free excretion of the urine is best stimulated by the plentiful drinking of citrous juices in dilution or potassium citrate in solution.

Solanine Versus Bromine

Concerning the medicinal treatment of epilepsy, I am obliged to take issue with the current teachings. Despite their reiterated recommendation and almost universal employment, I can not subscribe to the greatly overrated value of the bromides in this malady. I do not mean that they never are useful or that they have no place at all in its treatment. But, I am of opinion that the dosing of epileptics with bromides constitutes one of the worst abuses of these much-abused drugs and that, far from being ideal remedies in this disease, they are, by their chemical and pharmacological properties, totally unfitted for the long-continued and massive administration required in the routine treatment of epilepsy. That enormous doses of the bromides, long continued, do lessen the frequency and violence of the seizures, may be conceded; but, at a frightful cost of every other desideratum in the care of the patient—destroying protoplasm, tearing down cortical cells, paralyzing muscle, retarding metabolism and elimination, and drugging the patient into dementia, to say nothing of the minor inconveniences of indigestion and skin eruptions. No one pretends that they cure. The most that is claimed for them is that they reduce the number and severity of the fits which invariably return (usually with increased frequency and violence) as soon as the bromides are withdrawn. I have long ago vir-

tually abandoned the use of the bromides as a routine in epilepsy.

The truth is, of course, that epilepsy is a biological disease, and it, therefore, is extremely doubtful whether any medicine can exercise any curative effect upon it. Still, like many biological disorders, it has, in most individuals, a natural tendency to right itself, or, rather, there is in the patient's constitution a natural tendency to restore the stability of this particular phase of his organization, if only it is given the chance. Part of this chance consists, as we have seen, in removing every source of undue irritation and nerve drainage. This may be regarded as the negative aspect of treatment. The positive side should consist in furnishing the unstable cortex, if such a thing can be done, with just enough sedation to steady, yet, not to inebriate it—certainly, not to tear down its cells and destroy its protoplasm and to bring about all those metabolic disasters that the enormous chemical potential of the bromide salts precipitates.

An ideal cortical sedative for this purpose is to be found in solanine, the active principle of solanum, the root of the potato. This drug is an organic vegetable principle of about one hundred times the pharmacological potency of potassium bromide; hence, to be given in fractional dosage. It produces the same cortical sedation as do the bromides, without any of their evil effects. Given at first in comparatively large doses— $3/50$ to $3/25$ grain—for three or four weeks and then reduced to $1/25$ grain three times daily, it rapidly and effectually controls the seizures in even the worst cases of epilepsy, lengthening the intervals and lessening the severity, while at the same time the patient, instead of growing sodden and dopy and suffering from the disagreeable symptoms of "bromism," becomes progressively brighter and better both in health and mentality.

On the ground that epileptics usually are affected by a marked irritability of the intestinal tract, which contributes largely to their nervous instability, it is my practice to give, along with the solanine, another vegetable alkaloid, namely, verbenine, which seems to exert the same kind of sedative influence over the peripheral nerve-cells of the intestines that solanine does over the central cells of the brain.

Verbenine may be given in doses of $1/3$ or $1/2$ grain, twice or thrice daily.

Under this treatment, coupled, of course, with careful attention to the hygiene and diet, as indicated above, fully fifty percent of the cases of epilepsy may be helped—by which is meant that at the end of a period varying from six to twelve months the remedies may be permanently withdrawn, without any return of the seizures. There will be times, of course, when the withdrawal of the solanine will prove to be premature, when the fits will show signs of reappearing. If so, the treatment should promptly be reinstituted for a while. Eventually, however, it may be permanently omitted in a large number of cases.

When Bromides are Useful

In the management of the status epilepticus, though, the bromides have a useful and undeniable place. Here, they should be pushed, in large and frequent doses, giving 15 to 30 grains every two or three hours, reinforced with chloral hydrate in correspondingly large doses. The latter drug may well be administered per rectum, in doses of 30 grains dissolved in half a pint of warm water. As soon as possible, however, this heroic treatment is to be stopped, the milder treatment outlined above being substituted.

There is a sentiment abroad that epileptics are not to be permitted to do any work, physical or mental. I believe this to be a mistake. It undoubtedly is wise to restrict the amount of their effort, physical and mental, well within the limit of fatigue; still, there is no reason, in my judgment, except the esthetic one and the danger of their falling (both of which reasons may easily be forestalled) why the epileptic child or adult should not do a reasonable amount of work or study. Under the bromide-treatment, to be sure, these patients have grown less and less capable of mental effort as the course of their treatment progressed. But, under the treatment here laid down, they become, on the contrary, more and more capacitated for effort, and a judicious amount of it not only is not harmful, but, positively beneficial for them.

Patients that are forewarned, by an aura, of the approach of a seizure frequently can ward it off by inhaling nitrate amyl, or by swallowing a granule containing $1/500$ grain, each, of nitroglycerin and atropine. It is well, therefore, that such

patients should carry these remedies with them for emergency use.

Inutility of Decompression-Operations

The problem of brain-surgery in epilepsy is very indeterminate. It has become quite a fad in many quarters to perform decompression-operations in these patients. I have seen a great deal of it done, but, never once have I seen any benefit result from it in genuine epilepsy. In traumatic cases of jacksonian epilepsy, where a focal center of irritation can clearly be diagnosed, it not only is justifiable, but, obligatory to trephine and remove, if practicable, the source of irritation, whether it be a spica of bone or an adhesion of the subdural membrane or what not; and of this type an epileptoid patient often is entirely relieved

of his seizures by surgical intervention. But, in genuine biological epilepsy, where no jacksonian or focal indications can be made out, opening the skull is, in my opinion and experience, a perfectly useless and unwarranted procedure. There is no evidence that epilepsy has any relation whatever to intracranial pressure, consequently no benefit is to be expected from decompression. My conclusion is that surgery should be reserved only for those cases in which it is designed to remove a definite point of irritation—and these are not true epileptic, but, epileptoid cases. The recent fad of operating upon the intestinal tract (Lane's operation) for epilepsy is, in my opinion, useless and unjustifiable.

[To be continued.]

The Anatomy and Physiology of the Stomach

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(Continued from August issue, page 580)

Physiology. Sensory

AFFERENT impulses from the stomach are, for the most part, excitoreflex, but, some degree of sensibility exists. Hunger, thirst, and sexuality are sometimes grouped as general senses, analogous to the special senses, so called. Hunger is quite directly connected with the emptiness of the stomach; thirst is less directly due to the state of the stomach itself, and its relief not so immediately consequent upon ingestion. Satiety seems to depend quite directly upon the distention of the gastric rugæ and, hence, is not experienced in gastric dilatation unless an excessive amount is taken. Some individuals, by long repression of appetite, almost lose the experience of hunger. The thermic sense is much less acute in the stomach than in the mouth or even the esophagus—genuinely so, as shown by the tolerance by the stomach, of hot and cold lavage, and not merely apparently, as is the common explanation, on the basis that ingesta rapidly approach the body-temperature during deglutition. The muscular and

pressure-sense (or senses?) are not very acute, though subjective complaint of tension and weight is common. Anything approaching tactile sensibility on the part of the stomach is abnormal, but, neurotic persons rather frequently describe scratching sensations and those of movement of contents in a way that suggests accuracy of sensation. Nausea, which may be considered a general sense like hunger and thirst, though commonly experienced as a precursor, false alarm or accompaniment of vomiting and usually discussed as a gastric phenomenon, is really more characteristic of extra-gastric conditions. For instance, it occurs regularly in various lesions of the testicles and ovaries, in certain urinary irritations, in shock, disturbance of equilibrium, and from the use of various drugs acting upon the putative vomiting-center, which is closely connected with that of respiration.

It is of the utmost importance to grasp the fact that gastric pain is not necessarily an abnormality of gastric sensation. In fact, in gastralgias generally, while the existence of an abnormal irritant factor of

some sort is usually to be conceded, the fact that pain is felt is not in itself abnormal. Indeed, if pain did not result from the thermic, mechanic or chemic irritation, we should be justified in considering the afferent nervous mechanism as defective.

Motility

Cannon has shown by means of x-ray investigations that gastric peristalsis is excited by the ingestion of food or drink, developing gradually in degree and rapidity, up to about one marked wave every seven seconds, and gradually declining in force and rapidity toward the close of gastric digestion. Patient auscultation gives very nearly as accurate information as the x-ray and deserves more extensive clinical use. The most absurd blunders in diagnosis and therapy might be avoided by a few minutes' use of the stethoscope.

Care should be taken not to confuse the motor state of the stomach with the results of gastric motion. The seasick patient who replied to the ship-surgeon's remark about his having a weak stomach, "I guess I'm throwing as far as any of them," expressed a physiologic truth often forgotten. A stomach may be strong muscularly and excitable from the standpoint of innervation, and, yet, be unable to overcome the resistance of a tonically contracted, hypertrophic or strictured pylorus. For instance, in hyperchlorhydric isochymia, the term stagnation is of doubtful propriety, since it suggests a cessation of gastric effort. We, naturally, think of gastric atony as a factor in the production both of dilatation and ptosis, and it certainly is so in general. Yet in individual instances, all sorts of inconsistencies exist in comparing the organic state of the stomach and the functional fluctuations of its secretory and motor phenomena.

Cannon, some years ago, conducted a series of experiments that apparently demonstrated that pyloric relaxation was owing to the reflex from hydrochloric acid; but, this theory has been modified so as to consider the opposite influence of hydrochloric acid on the gastric and the duodenal sides of the pylorus, respectively. Clinically, it should be remembered that, other things being equal, the relaxation of the pylorus is inverse to the amount of hydrochloric acid; contents present containing little or no free

hydrochloric acid slipping quickly through the pylorus, so that sometimes the attempted extraction of chyme an hour after a test breakfast reveals that the stomach is empty, while, on the other hand, hyperchlorhydria is characteristically though not invariably attended by isochymia. Any hard substance, insufficiently masticated food, indigestible ingredients of food, such as pits and stones of fruit or actual foreign bodies, on reaching the pylorus, tend to cause its contraction and to delay the escape of themselves and of the contents generally.

Without proposing a transference of cardiac nomenclature to the stomach, it is well to remember that the terms hypertrophy, dilatation, valvular leakage, valvular obstruction, the conception of compensation or lack of compensation of valvular defects, the absence of direct relation between rapidity and excitability of heart action, with blood pressure and circulatory power, afford a very good basis for conceiving of the motor phenomena of the stomach, for the reason that the logic of cardiac conditions has been very well instilled into our minds, while it seems almost as if our conceptions of the motor physiology of the stomach have been inherently wrong and superficial.

The Gastric Sphincters

While there is a decided difference between a true valve, such as occurs in the heart and a sphincter, as they guard the two orifices of the stomach, the venter, with its pylorus and cardia, presents a marked analogy to the ventricle with its valves of entry and exit. The pylorus is, really, quite an efficient sphincter, while the cardia never, normally, is strong.

Patients are prone to demand relief of symptoms, their plea implicitly being that the cardia should be abnormally developed. The infant, even if nursed according to the precepts of modern hygiene, is liable to imbibe too much milk, and it is a wise provision of nature that it should puke, without nausea, to spill out the excess. Even in persons who eat leisurely and who swallow without sudden pharyngeal grasping of a large bolus, considerable air is inevitably swallowed; hence, the cardia should not be so efficient a sphincter as to prevent the necessary relief from the distention. If gas is produced in the stomach by fermentation

or otherwise or if from any cause a sudden spurt of peristaltic response occurs, the cardia should yield, so that belching and even waterbrash are, by no means, abnormal, if not exceeding reasonable limits. Unfortunately, these means of relief of gastric tension may be carried out noisily and so as to give offense to the individual as well as to his associates. When the stomach is distended by a meal, especially if relatively large quantities of liquid and gas are present, the retention of contents depends to a considerable degree upon gravity, so that, in bending over, as to put on shoes, or in reclining with the head dependent, the lack of resistance of the cardia may become conspicuous.

It has been pointed out, almost from the beginnings of medical science, that the stomach is peculiarly at the mercy of the conscious—one can not always say intelligent—centers that govern ingestion, as compared with most other viscera. We may go further and say that it is especially lacking in foolproof devices and that its very physiology may be fooled with. For example, two marked and rather disgusting neuroses result from tampering with physiologic provisions necessary to the protection of the organism. Allusion is made to mericysm (cudchewing) and to aerophagia.

The fact that the stomach must be able to relieve itself of too great tension by the safety-valve action of the cardia and must, indeed, in an emergency, be amenable to fairly prompt, more or less voluntarily induced and quite thorough emptying, renders mericysm possible—not now to consider the possibility of an atavistic resumption of a long-discarded function. A combination of conservative gastric and respiratory reflexes, allows the development of the alternate inflation of the stomach by a sort of giant hiccup and the discharge of air, which the patient usually declares is gas arising in some mysterious way within the stomach. In the horse, we treat aerophagia as a vice, under the term cribbing, and it can be controlled in human beings only by their cooperation and understanding of the actual neurotic perversion of physiologic functions.

Perhaps I have dwelt too long upon the various ways in which the inherent deficiency of the cardiac sphincter is manifested; however, both in civil and in military

practice, the complaint by patients, virtually amounting to a demand for a reconstruction of this part of the anatomy, is, in the aggregate, enormous. Even the medical profession does not fully comprehend how much of what is included in gastric symptomatology is based upon the conservative weakness of the cardia. It may be well to point out that the introduction of a true valve at this point would make necessary an almost inconceivably intricate safety-device, to allow for relief of undue gastric tension, and that even the introduction of a sphincter as competent as that of the pylorus or anus would, without a remarkably sensitive innervational control, tend to dilate a small-calibered tube such as the esophagus, whereas the stomach and rectum, with a normal maximum distensibility of about 1000 mls beyond the ordinary requirements, are not thus endangered. At any rate, even if we do not appreciate that any attempt on the part of nature to improve on the cardia would probably result disastrously, it is well to recognize that we are up against a hard natural fact and that we have no therapeutic means adequate to supplement the defects of nature.

Belching of Sour Chyme and Curdled Milk

It may be well, at this place, to anticipate somewhat. The fact that the cardia is not an absolute sphincter allows two additional complaints of perfectly normal physiologic conditions to be made: that the chyme coming up an hour or more after a meal is sour and that, if milk has been drunk, it comes up curdled. Patients and even some few physicians fail to realize that it would be quite abnormal, even serious, if the stomach contents did not contain hydrochloric acid and the milk-coagulating ferment during the active secretory period.

We may even go further and say that vomiting, though usually regarded as an abnormal reflex, is, rather, to be regarded as a conservative function. At any rate, experience shows that persons who vomit easily and often are, on the whole, less liable to serious gastric conditions than are those who, the same as horses, vomit with difficulty.

The pyloric sphincter is more amenable to treatment for controlling its tonicity. Strychnine, ergot, adrenalin, and the like may be employed to secure more energetic

contraction; the last two being especially indicated when not merely greater response to reflex stimuli is needed, but, a more permanent contraction of the tonic type. Various motor depressants may be employed for the contrary effect, but, owing to obvious contraindications in many instances cannabis indica, nitroglycerin and nitrites are about the only ones available. If ischochymia is especially the effect of painful conditions—somewhat after the analogy of anal spasm resulting from painful states or fissures—local anodynes, such as cocaine or its substitutes may be employed; however, it is rarely justifiable to go beyond the use of orthoform or of such drugs as sodium bicarbonate and magnesium oxide or hydroxide, which relieve spasm indirectly by diminishing acidity.

Occasionally, quite complicated problems in regard to the motor action of the stomach and its sphincters are presented. One may, for example, desire to quiet a stormy gastric peristalsis, while getting a more powerful extrusive action, or to tone up one muscle and depress another. It is, of course, impossible to solve some of these self-contradictory indications, unless by a round-about method adapted to the particular case.

Secretion

Passing over the secretion of mucus, which scarcely is part of the physiologic function of the stomach, and also the osmotic phenomena, including the so-called gastric respiration, which latter is merely an incidental elimination of carbon dioxide and absorption of oxygen on a very small and practically inappreciable scale, it may be said that there are only two well-demonstrated secretions of the stomach, namely, hydrochloric acid and pepsin.

Hydrochloric Acid

Hydrochloric acid is present in gastric juice to the amount of about 2 parts, by weight, per 1000, corresponding to about 50 degrees of decinormal solution. Remembering that the atomic weight of hydrogen is 1 and that of chlorine 35.5, the rule may be laid down that degrees may be converted into absolute proportions by multiplying by the number of days (365) in the year and pointing off so that high degrees of acidity are read as hundreds per hundred thousand, down to 3.65 parts: 100,000 for 1 degree.

Approximately speaking, the acidity of

chyme, that is, of gastric juice diluting food, is about half that of pure gastric juice. If the stomach contents at the height of digestion exceed the volume of the test meal, and the hydrochloric acid remains reasonably high, we may incline to the opinion that there is an excess of hydrochloric acid secreted. It may also be considered abnormal if any acid at all is secreted by the jejune stomach—and the potential irritation by the passage of the tube does not necessarily provoke an acid secretion. Most authorities declare that, if the stomach secretes hydrochloric acid when empty, ulcer may be positively diagnosed. I am not prepared either to accept or to deny this statement.

As, whatever bacteriologists say, hydrochloric acid in considerable concentration is practically an antiseptic, a high degree of hydrochloric-acid acidity in stomach contents almost absolutely prevents the development of more than a few degrees of organic acidity by fermentation. Thus, if the hydrochloric-acid acidity is from 30 to 50, the total acidity rarely exceeds 60 or 70; whereas, with low degrees of hydrochloric-acid acidity (1 to 10), the total acidity may reach or exceed 100. The maximum acidity observed in any appreciable number of specimens of any kind of clinical laboratory material is 100 degrees, whether we allude to hydrochloric-acid, organic acidity by fermentation in stomach contents or anything else, a combination of hydrochloric-acid and organic, fermentative acidity, the urinary acidity directly owing to the acid sodium phosphate and indirectly to a variety of factors. I have a very few times encountered as high as 150 degrees of acidity in the various materials mentioned, and nothing else in the clinical laboratory approaches these standards. H. R. Harrower reports a few observations of still higher acidity.

Gastric Gas

It is a curious fact, which I shall not attempt to explain, that in achylia gastrica, with complete absence of hydrochloric acid, the total acidity rarely surpasses 10 degrees, and high degrees are not often developed even on standing for some time.

It may also be pointed out that neither gastric contents nor feces often attain excessive degrees of acidity, nor much fermentation-gas after incubation for periods of twenty-four hours. Such cases of gas-

tric or intestinal fermentation do occur, but, not very commonly. This statement may seem arbitrary and opposed to the best authority; however, it is made up on the best authority of all—that of actual experiment in a U-tube of some sort. A percentage of 10 of gas, by volume, or dilute feces or ordinary filtered or unfiltered chyme is a very high result of incubation for twenty-four hours.

The common conception of the frequent occurrence of a combined vinegar- and gas-factory in the stomach, in accordance with a crude but classic description, is quite fallacious. Even a 100-percent gas production, by volume, in an incubation-period of twenty-four hours, does not explain more than a few belchings of gas from the stomach in the few hours of the period of digestion. There do occur a very few cases of yeasty invasion of the stomach or intestine, or both, in which enormous quantities of gas are evolved. I remember a sample of feces, carefully surrounded with warm water, to facilitate the search for suspected amebas (which, as almost always in temperate climates, failed to materialize), which foamed like yeast—of which, in fact, it largely consisted; a few that have yielded enough gas to blow the cork to the ceiling; and a very, very few samples of stomach contents that have, to some small degree, corresponded to the time-honored description of gas production in the stomach by fermentation. Yet, with every allowance for swallowed air, large quantities of gas certainly are belched up, both by patients with low or practically no hydrochloric acid and occasionally by those with an excess that almost surely precludes the possibility of much fermentative activity to produce either acid or gas.

The apparent discrepancy between the laboratory and the clinical picture has been explained on the basis of a gastric respiration, analogous to that occurring in the lungs; still, as stated before, the construction of the glandular lining of the stomach precludes the possibility of a true analog of respiration assuming any quantitative importance.

Explanation of Gastric-Gas Production

The following is what many years ago I offered as the true explanation:

Acid from the stomach, whether secreted

or formed by fermentation, meeting the alkaline carbonates of the bile and the pancreatic and essential intestinal juice, inevitably produces carbon dioxide by effervescence. Qualitatively, this can be demonstrated either by adding an acid to the latter secretions or a carbonate to the stomach contents. Quantitatively, it may either be calculated or demonstrated empirically that between 1 and 3 liters of carbon dioxide gas at ordinary atmospheric pressures will be produced, if we assume that there is an abundance of carbonates to react with known quantities of gastric contents of known attainments of acidity, or if we accept the statement that the respective carbonatic secretions amount to from 500 to 1000 mls in twenty-four hours, of a given strength in carbonates, and add acid to neutralize. This amount of carbon dioxide may be taken as the normal, and it undoubtedly plays an important part in allowing the intestines to float upon themselves in the abdomen, in distending them to a proper degree, and in mechanically stimulating peristalsis.

Given an inadequate supply either of acid or carbonate, in the respective body-fluids, the lack of effervescence well explains certain states of atony and constipation. Given a secretory excitability, so that both sets of glands continue to secrete, drawing upon the blood, into which the necessary raw material either for acid or carbonate is reabsorbed, and the continued production of enormous quantities of carbon dioxide gas is perfectly plausible. However, not in all, but in only a rather small proportion of cases of hyperchlorhydria are actually produced large amounts of carbon-dioxide gas. Most patients with hyperchlorhydria complain of gas, but, on careful elicitation of history and examination, it is obvious that they really belch very little nor is the stomach distended. They simply exaggerate the effects of the small quantities of gas, including swallowed air (always present), and confuse the irritation of highly acid contents with the pressure of gas. For hyperchlorhydria to produce large quantities of gas, two factors are necessary: a fairly patulous pylorus and an equal secretory activity on the part of the carbonate-secreting glands mentioned.

[To be continued.]

What Others are Doing

ANTHRAX FROM SHAVING-BRUSHES

The Public Health Service has been informed, by the Surgeon-General of the Army, of the occurrence of several cases of anthrax that apparently were contracted through infected shaving-brushes. In connection with this fact, *Public Health Reports* (July 12) reviews the English experience in similar cases, as reported by the Local Government Board. Among civilians in England, 19 cases of anthrax, 14 of which originated from infected shaving-brushes, were observed between June, 1915 and August, 1916.

Among English troops in France, 28 cases of anthrax occurred, the shaving-area of the face being involved in 23. Yet, it is not possible to supply positive proof that the infection was transmitted through shaving-brushes. Among the troops in England, 18 infections with anthrax were observed, at least 12 of these being in the shaving-area, and, therefore, suspected of a like origin.

Of 33 cases with known outcome, 21 ended fatally, this constituting a mortality of 64 percent. It is pointed out that, except in endemic locations, such as tannery districts, many mild cases probably recovered without being diagnosed, in consequence of which the mortality seems higher than it probably is. The cases observed were, as a rule, of the usual malignant pustular type associated with edema, and by the further fact that the infections were on the neck or, more serious than this, elsewhere on the body.

Upon examining the lots of brushes that were held to be responsible for transmitting the infection, it was found that some of the infected brushes presumably had been disinfected in accordance with requirements. Horsehair from China and Siberia seemed to be principally involved, especially those of gray or yellow hair, and imitation badger hair. Hog bristles, which are stiffer, seem to be free from anthrax. Black or thoroughly dyed hair seems to

have been disinfected satisfactorily. The thorough and repeated washing in hot soapy water, which a shaving-brush receives in use, appears to rid it of the dangerous infection mechanically, since most of the cases occurred soon after a new brush was used, and in two brushes that had caused anthrax the free portion of the hair showed no infection, while anthrax-bacilli were found on the ends of the hair imbedded in the handle; in the corresponding unused brushes, the anthrax-bacilli were found on the free portion of the hair.

It follows from all this that it is wiser to buy shaving-brushes of sufficiently good quality to assure suitable cleansing in the process of manufacture, even though this requires a greater outlay. More, a new shaving-brush should never be used without previous careful washing in hot soap water. It has been found in actual experiment that soapsuds has a germicidal action on many microorganisms and that the simple precaution of washing new brushes with hot soapsuds will go far toward preventing infection. The same medication may suitably be recommended in the case of new toothbrushes, even if they are bought in sealed cartons and presumably are sterile in a commercial way.

DICHLORAMINE-T

We never take up any number of *The New York Medical Journal* but that we find in it something we simply can't resist appropriating. In the issue of June 29, we combat the covetous instinct heroically, until we come to Scal's article on dichloramine-T in the treatment of wounds. His work is almost entirely on accident cases of industrial origin. He well denominates the results as remarkable. Where it previously required ten to fifteen days to heal noninfected wounds, and double these times for those that had become infected, the same results were now obtained in a much shorter time. If properly applied, immedi-

ately after the wound was received, the danger of infection is almost nil; while if the case is already infected when the treatment commences, pus entirely disappears within a week.

Before application, the wound must be absolutely dry. Only a glass applicator can be employed. The wound is then covered with gauze and bandaged. The dressing is changed every twenty-four hours for four or five days, new solution being applied and fresh bandages. It is absolutely unnecessary to touch or wipe the wound. If the gauze sticks to it, spray with the solution. Punctured wounds require free incision before the solution is applied. Foreign substances should be removed as well as devitalized tissue. In general the application should be thorough, but no handling or manipulation of the wounded tissues should be made beyond what is absolutely unavoidable.

The sticking of the dressing—we feel constrained to add as a suggestion—is easily obviated by the use of paraffined lace mesh gauze.

ENORMOUS CARBUNCLE IN AN AGED MAN, WITH RECOVERY

In an interesting communication to *The International Journal of Surgery* (July), Dr. B. L. Branch tells of the case of a man of 83 years who had a "risin" on his back: a hard, red swelling, half the size of a partridge-egg, three inches below the right scapula. It looked to the Doctor like a small carbuncle. This tumor was bruised when the patient drove out into the country, and some time later, when the Doctor saw him again, he was in bed, his temperature registering 103 degrees and pulse over 100. The carbuncle had enlarged to 3.1-2 inches in diameter and had a very angry look.

Operation under anesthesia in a patient of such advanced age was not attempted, the prospects for that being rather discouraging. Accordingly, Doctor Branch decided to employ the Carrel-Dakin method of treating infected wounds. One tablet of chlorazene was dissolved in 4 ounces of hot water, then several layers of gauze were placed over the carbuncle and kept thoroughly saturated with the antiseptic solution. Within thirty-six hours, the fever was gone and there was very little pain. At one time, Doctor Branch counted 30

small openings on the top of the carbuncle, but, in the course of ten days, these had all united and there was left an exposed necrotic surface not less than 3 inches in diameter. This eventually sloughed away, leaving a cavity about 1-4 or 3-8 of an inch in depth. Avoiding any manipulation with instruments that would cause bleeding, the wound was cleansed twice daily, the gauze saturated with the solution being kept constantly applied, while the necrosed tissue was carefully removed from day to day, as this could be done without causing bleeding.

After twenty days of this treatment, the wound was clean and showed a healthy granulating surface about 2.1-2 by 2.1-4 inches in depth, and after another week healing virtually was completed.

A PLEA FOR THE CONSERVATION OF HUMAN MILK

In view of the fact that the mortality of artificial fed infants is fifteen percent higher than that of the breastfed, it is proper, declares Dr. W. L. Funkhouser (*Jour. Med. Asso. Ga.*, July), to give more time to consider the production and care of human milk, so that the excessive infant mortality may be lowered. For many years, efforts have been made to find a substitute or a modification so adjusted that infants can thrive on them, as well as they can on mother's milk. Chemically and theoretically, the adjustment may, within narrow limits, correspond with the mother's milk. Nevertheless, clinically we fail to obtain the desired response, on the part of the babies, to the scientific production.

Yet, it is of the highest importance to preserve infant-life and to lower the mortality of the babies, by securing for them that nutriment on which they thrive best. Indeed, it may be said, with justice, that the future of our country depends upon the infants that are now being born into the world.

In view of these facts, Doctor Funkhouser enters a plea for the conservation of human milk. He claims that more babies can be nursed or furnished with breast-milk than are so provided. Whenever in a given case the milk of a mother does not agree with the baby, it is a mistake to order artificial feeding. Much

rather, the mother's condition should be improved by giving her ample sleep, rest, and outside exercise, thus bringing the quality of her milk to standard, so that her baby can thrive on it. In cases where mother's milk is not available, Doctor Funkhouser urges that donors or wet-nurses should be found, either for direct nursing or so that the milk is expressed from the breast and fed to the infant in need.

Doctor Funkhouser claims that it is not difficult to find well-to-do mothers who would gladly be donors, provided they be not subjected to the dangers of having sick or delicate babies brought to them. The poor or those of the ignorant class will part with their milk for a fee, the customary price being ten cents per ounce. In the case of these, the milk must be expressed under the direction and observation of a nurse or responsible representative of the recipient, for the protection of the baby against uncleanness or substitution. The city- or county-physician for charity cases may have collected, in this way, breast-milk, which may be kept as cow's milk, and which, if judiciously used, frequently may swing the balance in the child's favor.

PURGATION OF THE PATIENT BEFORE OPERATION

The commonly accepted custom of "preparing" the patients for operation, by inducing active purging, has recently been opposed on various sides, it being advanced that this procedure not only fails to accomplish any good, but, that it actually is responsible for much postoperative distress suffered by patients. It even has been accused of being responsible for many fatal cases that, otherwise, might have terminated favorably.

This subject was investigated very carefully by Dr. Walter C. Alvarez (*Surg., Gyn. & Obstet.*, June), who discusses in considerable detail the reasons for and against preoperative purging. He arrives at the conclusion, which is confirmed by animal-experiments, that the practice of purging should be abandoned. At the same time, he offers various suggestions by which postoperative distress may be avoided. The summary of Doctor Alvarez' experiments and observations is so to the

point that it may be cited literally. According to him, the reasons for avoiding purging before an operation are:

1. Some of the purgatives owe their effects to the fact that they are irritant poisons that must be removed quickly from the body. Others act by interfering with intestinal absorption and by upsetting the balance of the salts. In either case, they bring about pathological conditions. The body is weakened rather than strengthened.

2. We know now that the dehydration of the body and the upset in salt-balance are bad, particularly before an operation in which there may be hemorrhage and vomiting.

3. Following magnesium sulphate, there may be an increased amount of fluid in the bowel, the desire to void which causes disturbance. In operations on the colon, liquid contents are harder to control mechanically than are solid masses.

4. There is an increased growth of bacteria. There is some evidence that there is an increased absorption of toxins, because of a greater permeability of the mucous membrane to bacteria. Undigested food may be carried down into the colon, thus supplying increased pabulum for the bacteria.

5. By weakening some parts of the bowel and making others more irritable, the even movement of material from stomach to anus is rendered impossible.

6. Whether from disturbances in motility, in absorption into the circulation or in the bacterial conditions, there certainly is a tendency to flatulence and distention.

7. When the bowels are emptied frequently during the night, the loss of sleep is considerable. The purgation is particularly trying if the patient is wearing a large cast, has a broken leg or other painful lesion that makes each resort to the bedpan an ordeal.

8. If the patient should happen to have some intestinal obstruction, a gangrenous appendix, a badly diseased Meckel's diverticulum or adhesions are forming around some pus, purgation may directly cause death.

9. Purgation makes the bowel react so poorly to drugs that there may be grave difficulties in meeting postoperative emergencies.

10. Emptying the bowel by starvation and purging makes the resumption of colonic activity much more difficult. The

colon must be filled and distended to a certain extent before it will empty itself.

11. The fact that children and nervous women will sometimes start to vomit during the night, before the operation, shows that the purge must be responsible for some of the postoperative nausea and vomiting. The ether adds the finishing touches to what was begun the night before.

It is suggested that food be given as late as possible before operation; that even enemas be avoided if not absolutely necessary; that water and solid food be given by mouth as soon after the operation as possible; and that purgatives be avoided after operation as well as before.

MAGNESIUM-SULPHATE CREAM FOR WOUNDS

The Prescriber (June) abstracts an article from *The British Medical Journal* for March 23, in which the author refers to earlier work published concerning the use of magnesium sulphate in the treatment of wounds. He now recommends a cream containing dried magnesium sulphate, 24 ounces, and glycerin of carbolic acid (1:10), 11 ounces. This cream is very hygroscopic and should be kept in a suitable jar.

The wound is packed and thickly covered with this cream and left alone for three or four days. A profuse discharge of serum takes place. After a few dressings, a bright granulating surface presents itself, when the dressing may be changed to magnesium-sulphate solution for a few days.

The method is simple, inexpensive, and gives rise to no constitutional disturbances. Its sphere of action is confined to the first stage, after which other remedies should be resorted to.

DIETETIC TREATMENT OF LIVER DISEASES

Dr. Allan Eustis, writing in *The New Orleans Medical and Surgical Journal* (August), offers experimental and clinical data indicating that proteins are injurious in conditions in which the liver is diseased, while a high carbohydrate diet is indicated.

Doctor Eustis has found that the diet should consist essentially of an abundance of carbohydrates, and, while a transient glycosuria may be produced, this soon disappears as the liver-cells are regenerated.

This must be selected according to the gastric function of the patient, and, if vomiting exists, glucose by drip-proctoclysis or by hypodermoclysis must be resorted to. Where there is little disturbance of the gastric function, the following diet-list should be selected from and the patient maintained on this diet as long as a positive aldelyde reaction is obtained or as long as intestinal toxemia is present. There follows a diet-list for patients with defective liver function:

May Take: Soups: all clear soups, vegetable broths, puree of corn, beans, peas, asparagus, spinach, celery, onions, potatoes, tomatoes.

Farinaceous: oatmeal, rice, sago, hominy, grits, cracked wheat, whole-wheat bread or biscuits, corn, rye, and graham bread, rolls, dry and buttered toast, crackers, muffins, waffles, batter cakes, wafers, grapenuts, macaroni, noodles, spaghetti.

Vegetables: potatoes (sweet and Irish), green peas, string-beans, beets, carrots, celery, spinach, artichokes, avocados (alligator-pears), eggplants, lettuce, onions. All vegetables except cabbage, cauliflower, and turnips.

Desserts: rice and sago with a little cream and sugar, figs, raisins, nuts and syrup, stewed fruit, preserves, jellies, jams, marmalades, gelatin; prunes, apples, pears, either raw or cooked.

Drinks: tea and coffee (with cream, but, not milk), grape-juice, orangeade, lemonade, limeade, Vichy water, cocoa. An abundance of pure water, cold or hot.

Patients must not take: Veal, pork, goose, duck; salted, dry, potted or preserved fish or meat (except crisp bacon); oysters, crabs, salmon, lobster, shrimp, mackerel, eggs, turtle and ox-tail soup, gumbo, patties, mushrooms, mince pie, cabbage, cauliflower, turnips, cheese; alcohol.

In conjunction with the dietetic régime, it is necessary to direct forces toward overcoming any tendency to the production of intestinal toxemia, and this we believe to be best possible by the administration of "bulgaric acid cultures," such as, for instance, galactenzyme.

Negative tests for urobilinogen and indican extending over a week indicate that either eggs, fish or easily digestible meats may be taken in moderation. In his practice, Doctor Eustis limits this to at most once a day. It will be found that butter-

milk to which lactose has been added is the best animal protein on which to start, but, the author can not too strongly urge a constant control of the diet by frequent examination of the urine.

SCARLET FEVER AND EPILEPSY

In *The New York Medical Journal*, July 13, Friedel contributes an interesting paper on a case of scarlet fever and epilepsy. We note especially his use of anterior-lobe pituitary substance. Cushing's experiments showed that the removal of this lobe leads to retardation of growth, non-development of secondary sex characters, sluggishness, and tendency to excessive obesity. All of these were shown in the case described, which was that of a girl 13 years of age. The history covered several years subsequently. Improvement began under the use of anterior-pituitary substance, the epileptic attacks ceasing for three months. The medicine being then suspended, the attacks returned, but, again subsided when the treatment was resumed. Unfortunately, the case was then lost sight of. So far as described, however, the results of treatment are highly significant, pointing as they do to the possession of remarkable therapeutic values by the product.

GLUCOSE LOCALLY

In *The British Medical Journal*, June 15, 1918, Benians suggests the use of glucose for superficial bacterial infection. His argument is as follows: Most pathogenic bacteria ferment glucose, producing a definite acidity. Many bacterial toxins form best in alkaline media, some of which are inhibited by glucose, the diphtheria toxin being one. Fetid discharges are mostly due to tryptic digestion of proteins which can only occur in alkali. One-fourth percent of glucose stops the formation of indol, as a rule.

Bromidrosis quickly ceases on the application of glycerin. The organism of *ozena* grows with difficulty in acid broth and then without odor or indol production. A twenty-five percent solution of glucose renders the secretion acid and completely kills out the specific infection. The results in chronic otorrhea are variable. In treating chronic vaginal discharge, in most cases prompt improvement follows. The patient's comfort is thus increased and the normal

acid reaction restored. The normal bacterial flora then resumes possession of the field.

CALCIUM LACTATE IN NASAL SURGERY

Dr. Philip A. Harry (*Prescriber*, July) calls attention to the great drawback in nasal surgery presented by the profuse hemorrhage that so frequently interferes with the progress of operations. Even if a plug is placed in the rhinopharynx, to prevent the blood reaching the larynx and the esophagus, there is a disadvantage of possible reflex disturbances that not only may prove annoying to the anesthetist, but, tend to increase the hemorrhage. Doctor Harry has found the usual methods of preventing hemorrhage very unsatisfactory and concludes that it is necessary to prescribe some substance that will increase the coagulability of the blood, and thus act as a hemostatic.

Calcium lactate was found to be a suitable drug for this purpose. It is not unpleasant to take and can be administered conveniently in the form of tablets, 20 grains being ordered to be taken three times daily.

If possible, the treatment should be begun at least a week before the operation, while the patient should be advised to restrict his tobacco and alcohol and to eat no fat beef or mutton and as little fresh fruit as possible. When there has been no opportunity for such preparatory course, it is helpful, before packing the nose with cocaine and adrenalin chloride, to inject into each inferior turbinate 20 minims of a saturated solution of calcium lactate. The injection should be made while the patient is reclining, instead of in the sitting position. In the case of women, the sedative action on the nervous system is noticeable, although during or just after the menstrual period calcium lactate taken by mouth has little or no effect.

Among the advantages of calcium lactate are the following: Hemorrhage is greatly reduced; the quantity of cocaine and adrenalin necessary is less; the tone of the blood-vessels is improved; healing of the mucous membrane is more rapid. Pharmacists prefer to dispense the lactate instead of the chloride, which is very deliquescent; the former is also more readily oxidized; also, the basic radical is placed

more fully at the disposal of the body. To children suspected of hemophilic tendency, one dram of the syrup of calcium lactophosphate should be given three times daily for a week before any nose or throat operation is undertaken.

The disadvantages of a temporary use of calcium lactate are few. In several instances, patients have complained of severe headache for several hours after the operation. This is most marked in septum-operations, when adrenalin chloride has been injected. The patient should, in such cases, be advised to drink freely of lemon-water and to apply cold to the head.

INTRAVENOUS INJECTION OF EUSOL IN CHRONIC ARTHRITIS

Fairclough (*Brit. Med. Jour.*, June 15) treated 14 cases of chronic arthritis by the intravenous injection of eusol. Six were very much improved and but 4 unaffected. These cases were not typical of rheumatism and the infection was of doubtful origin. The solution used contained 12-1.2 Grams chloride of lime, shaken up with one liter of water, allowed to stand some hours, filtered and 81-2 Grams of common salt added. It contained 1-2 percent of free hypochlorous acid. The dose was 100 mls. Those who improved under this treatment showed benefit not only in the joint condition and general health but in a steady temperature. While it is uncertain whether we are here dealing with a toxemia or a direct invasion of the joint by organisms, many of the symptoms must be due to toxin action. If these can be stopped the patient must be greatly helped. Definite improvement should follow the first dose within a day.

THE ACTION OF TETHELIN IN STIMULATING TISSUE REPAIR

The observations on the action of tethelin, which was isolated by Robertson in 1916, as, presumably, the active principle of the anterior pituitary body and is supposed to stimulate growth, were investigated recently by E. L. Barney, of San Francisco (*Jour. Lab. & Clin. Med.*, May).

Reasoning from the basis that acromegaly is caused by a hypersecretion of the anterior lobe of the pituitary body, Doctor

Barney believed that tethelin would have a very great value in certain cases of delayed union in fractures. Also, he assumed, one may anticipate less tedious results in the various forms of skin grafting and in treating gastric ulcers; in fact, in almost any epithelial lesion tending to chronicity.

Following the suggestion received by experimental work on wounds in animals, it was decided to use tethelin in the treatment of several types of indolent ulcers, such ulcers being selected where the usual ointments and stimulators of granulation-tissue had been tried without success.

In several cases of indolent chronic ulcer, of which case-histories are presented, very satisfactory results were secured from the application of tethelin in powder form or in solution or mixed with lanolin. This satisfactory result was observed, usually, in cases in which other treatment had been tried without avail, and the conclusion is justified that tethelin will prove of decided service in stimulating tissue repair.

ANTIQUITY OF THE OFFICE OF CORONER

King Athelstane of England, writes Everett Spring in the *April Case and Comment*, felt in a beneficent mood; he granted a charter of privileges to St. John of Beverley. The royal mood was merry; therefore King Athelstane comprised in rhyme the privileges of his subjects. In eighty lines of verse he mapped out the performance of public functions. Here is a fragment:

"If man be founden slain I drunkend,
Starved on Saint John rike, his agen men,
Withouthen swike his aghen boillifis make ye
fight.

Nan oyer Coroner have ye might,
Swa mikel freedom give I ye,
Swa hert may think or eghe fee."

For 1,000 years the rhyme has survived—not because of its excellence, but for its historical value. It establishes, for one thing, the antiquity of the office of coroner. Now, despite the ten centuries of traditions that cling to the office, some states want to shake off,—and others have,—the institution that King Athelstane sponsored.

Through 1,000 turbulent years coroners have marched in and out through history. One thousand years of literature have caught the quaint figure.

Miscellaneous Articles

In Memory of Doctor William F. Waugh

I FIRST became acquainted with Dr. Waugh, here, about 1887 or 1888. He was professor of the Practice of Medicine in the Medico-Chirurgical College, then new. I visited the college occasionally, and became acquainted with several of the professors, but, Professor Waugh was by far the most popular teacher with the students. It is strange how little incidents like the following will stick in one's memory. The students requested Professor Waugh to give them a lecture on Egypt. I was invited to attend the lecture, which he introduced by saying: "I don't know why I was asked to lecture on Egypt unless it is because I have been in South America!" He then proceeded to give an excellent lecture on Egypt. Doctor Waugh had always been a wide reader, so, it was as easy for him to lecture on Egypt, as it would have been to speak on many other subjects.

Some years before I knew Doctor Waugh, he had been a medical officer in the Navy, and it was in this capacity that he had been in South America. He has told me of having made visiting inspections of hospitals there and elsewhere. He said that he first asked to be taken to the cellar, then, to the kitchen. His inspections were no "parlor" affairs. And, in hospital as in household economics, he laid great stress upon the revelations of the garbage can. These ideas, gotten in conversation with him, have always clung to me; I suppose, because they are basic.

While riding from patient to patient, I noticed that he always carried a book with him. One day I looked at his book companion, and it was not a medical book. I think on that occasion it was some sort of history. On being asked if he was specially interested in that subject, he said, somewhat confusedly, "I just wanted to see if the author had it right." His feel-

ing of modesty confused him, but his reply indicates his extensive acquaintance with books and literature of all kinds.

But, his prowess was not all in his brain. I saw him at his home early one Sunday evening, and found rather an animated



Doctor Waugh of Philadelphia.

conversation going on among those present. It appeared that, early in the day, the question of walking 25 miles had been discussed. Some of his younger friends thought that he couldn't do it. He and one or two young fellows, that day, had walked to Bryn Mawr and back, a distance of about 25 miles. I was inwardly glad that I had not made my call early in the day.

Although he was a very modest man, these little incidents illustrate his com-

petence and self confidence. Many more incidents could be given to illustrate his companionableness. He was genial and gentle. In this connection I remember an occasion when he and I were dining with an extremely orthodox family. Some question of creed came up, and he discussed it so gently, in such a sweet spirit, and yet so clearly and convincingly, that the liberal point of view seemed to be entirely acceptable to our friends; that is, acceptable from him; although, perhaps never acceptable from any one else before nor since.

Dr. Waugh had a great many friends in Philadelphia, both in and out of the profession, and great was the surprise when it became known that he intended to move to Chicago. I think the real explanation was psychological. He always had breath of view—he wanted more breath of life, and he thought he could find it in the great west. I think that the broad and bounding west had been calling him for some time before he yielded.

While I knew him intimately, he never told me what I have just written. Perhaps he did not know it then. We often do things without knowing why. I could not have divined the moving reason for his going, then, as well as I can now. Now, I know how he looked upon the parts of the great west and southwest which he visited from time to time, and I now feel that it was this great call that took him away from Philadelphia. After feeling the call, nothing else would have ever satisfied him.

We seldom talked of commonplace things. His presence inspired thoughts and problems large and deep. I never knew him to be the least bit contentious. We never disagreed. And we did not always agree. We simply exchanged; but, not with indifference. Some times with animation but never with intolerance.

His face and eyes were expressive, and his voice musical and gentle; but his "presence" did not depend upon things physical. He was just as much "present" in the dark. That, I suppose, is a spiritual presence, that we can feel without seeing, hearing or touching. Few men have it.

Just one more little incident, please. I first visited him in Chicago in 1893 after the close of the World's Fair. He lived

not far from the grounds. On a moonlight night we went among the buildings, then partly in ruins. Part of the time we walked and part of the time we went in a boat through the lagoons. The forms loomed up in the moonlight like specters and like structures in fairy land. I had just returned from Egypt and the Holy Land. On this occasion Doctor Waugh was an ideal companion. We did not talk all the time. But, I think, we both enjoyed every moment of that memorable night. There are men whose presence would have killed the romance of such an occasion. Is this a difference in souls?

And, now, our friend has passed away. Where? Let us think of his soul as having gone to the place of sunsets and dreams; to dwell with kindred great souls and grandeur and beauty forever.

C. F. TAYLOR.

Philadelphia, Pa.

DOCTOR WAUGH AS A MAN

When the telephone brought me the message that Doctor Waugh was dead, I felt a sense of personal loss, such as one feels only when a cherished friend passes into the great unknown. Only a couple of weeks ago, I received a few lines from him, saying that he would be glad to have a visit from me. I knew then that my old friend was failing, otherwise he would have remembered that I am unable to leave my chair. So, when the word came that he had solved the great mystery, it was no surprise to me.

At once my thoughts turned back to my earliest relations with him, before I had ever met him personally. That was thirty-three years ago, when he was editing *The Medical World* of Philadelphia. I was just beginning to practice medicine and some friend had placed into my hands a copy of *The World*. The general tone of the journal attracted me so much that I invested a little of my scanty stock of money in a year's subscription. In the first two years of my practice, I received an immense amount of help from Doctor Waugh through the columns of his journal, and on several occasions I made bold to write to him for light upon knotty problems. The kindly reception he always gave to my inquiries made me feel instinctively that not only was he worth knowing as a physician, but, as a man. So, when after the founding of the

Illinois Medical College he came to make his home in Chicago and joined us in that enterprise, I felt that it was no stranger whom I was privileged to meet.

When we contemplate the qualities that make a man—a man of the highest type, industry, patience, courage, sincerity, fair-mindedness—we who knew him best can testify that Doctor Waugh possessed them all in a high degree. One of his most marked traits was his never-failing faithfulness to a friend. If he accepted one's friendship, it was without mental reservation. He gave his whole confidence, and he expected entire confidence in return. This wholeheartedness was, some times, taken advantage of by his enemies; but, he felt in this matter as did the late Henry Ward Beecher, who used to say that he would rather have his trust abused some times than to go through life suspecting everyone's motives. Likewise, Doctor Waugh once remarked to me that the most unhappy people in the world are those who live in an atmosphere of suspicion, mistrusting everybody, and always attributing unworthy motives to the acts of others.

A man possessing the qualities that characterized Doctor Waugh is not likely to accumulate great wealth, because it was foreign to his nature to pile up money when there were opportunities for doing good with it. However, if he did not leave behind him a fortune, he left a memory in the hearts of those who knew him intimately, a memory that will be as the fragrance of a never-fading flower.

WILLIAM RITTENHOUSE.

Chicago, Ill.

DOCTOR WAUGH AS A FRIEND

Again one of my most-esteemed friends has entered the shadow of the great mystery. Dr. William F. Waugh has reached his journey's end, and we that are left must journey on alone until the time arrives for our great adventure. We were companions on life's road for more than twenty years, and one becomes very familiar with a fellow traveler in twenty years. We discover each other's good points and also their bad ones. There were some peculiar distinctive traits in Doctor Waugh's character, but, no bad ones.

He had the genius of friendship; he was hospitable, generous, sincere. He was

social and kind and "loved the wine of wit—the dessert of a good story that blossomed into mirth." He was honest, fearless, independent, and original, earning and holding an enviable position in medical thought, and, moreover, was one of the broadest-minded, most versatile physicians of my acquaintance.

Doctor Waugh was an exceptionally well-educated man, but, not narrow, as so many learned men are. He had but little patience with the bigotry, narrowness, and the illiberal, autocratic attitude of many physicians. His editorials and medical writings were classics—many of them—fearless, yet, kindly. He wrote from rich experience and never hesitated to speak the truth as he understood it, though his writings often were criticized and ridiculed by a few so-called "authorities." He was too big and too cultured to be disturbed by the prejudice, egotism, and bigotry of any man or clique. He was intellectually hospitable and believed in the fair exchange of thought and in the chivalry of discussion.

No physician of my acquaintance was superior and but few were equal to Doctor Waugh as a teacher and public speaker. It was a distinct joy and privilege to hear him discuss a medical paper. His speech was so simple, clear, and natural, so prodigal of comparison, so logical, and his sentences were so well chosen that he put to shame many a verbal varnisher and illogical would be "authority."

Doctor Waugh loved nature and he often frequented the great sanatorium of "out-of-doors." He had eyes to see that this habitable world is a tangle of beauties, like the interlacing of the sunshine and the shadow in a summer wood when sunlight rules the sky. He knew that one's life could be infinitely enriched by spending a few weeks each year with nature. He knew that out-of-doors is healthful, energizing, pure, and peaceful, that recreation means re-creation, and he wrote much of out-of-door life and its advantages.

I visited Doctor Waugh a short time before he laid his burden down. He was as philosophical and tranquil as was Socrates in his last hours, having no dread of the future, but, calmly was waiting for the end. He seemed to be living in a neutral territory belonging neither to the day nor to the morrow, but, in a certain high re-

gard, belonging to himself alone. And in this gray gloaming of his life I know his spirit was at rest. He knew the time had come to watch the day dim and the night darken, until, at the end, he who began his dreamings in the day would end them in the night. Again he was in spirit, at least, under the neighborly sky and companionable stars, feeling the touch of summer's lips and the handclasp of congenial friends.

Doctor Waugh needs no words of mine as a tribute to his work and worth—thousands of grateful and appreciative physicians and laymen know of these; but, as he was my friend and I was his, I write these few words, to express my sorrow at the loss of so wise a teacher and physician, so kind a man, and so true a friend.

GEO. F. BUTLER.

Wilmette, Ill.

DOCTOR WAUGH AS AN EDITOR AND AUTHOR

I first met Doctor Waugh some sixteen or seventeen years ago. I remember the occasion very distinctly. It was at a dinner of the old Chicago Academy of Medicine, presided over (in fact if not in person) by that rare genius, Dr. James G. Kiernan. I sat next to Doctor Waugh, and was charmed by his genial personality, by his rare quality of putting a stranger like myself—a young man somewhat abashed by the erudite company in which he found himself—immediately at his ease, and by the wide range of his acquaintance with every topic discussed.

After this I saw him quite frequently, and read his editorials in the old ALKALOIDAL CLINIC with increasing interest as I came to know him better. I was an editor myself, and was trying to learn the secret of success of the editorial writers who presided over the destinies of the journals which were really read by the medical profession. THE ALKALOIDAL CLINIC was one of these. It was not difficult to see that it owed its success to the rare combination of the fire and energy and farseeing comprehension of human nature characteristic of Doctor Abbott, with the therapeutic enthusiasm, simplicity of style, literary genius, and human understanding of Doctor Waugh.

In February 1904 I became myself a member of the editorial staff of the

CLINIC. I was given this position to fill in as best I could the gap left by Doctor Waugh's temporary withdrawal from active work. The fall before, he gave up his work to undertake a houseboat trip, for the benefit of Mrs. Waugh's health, down the Mississippi River. The editorial details were left in my hands, but the Doctor continued to contribute editorials to the journal, and, on this trip, devoted much time to the preparation of the manuscript for the great work on practice written jointly by himself and Doctor Abbott. The following summer, he returned to Ravenswood. From this time on, he staid only intermittently in the editorial office. He was a free lance, coming and going as he wished, spending his winters largely in the south, until he became interested again in teaching at Bennett Medical College, of which for several years he was dean.

But, whatever he was doing, wherever he was, he continued to contribute to the editorial pages of THE ALKALOIDAL CLINIC and of THE AMERICAN JOURNAL OF CLINICAL MEDICINE when the name was changed. Through all these years, in sickness and in health, whether spending his winter in Corpus Christi or his summer in Muskegon, he always managed to contribute something virtually every month.

In his editorials, there was always something distinctive. He was an enthusiast and he imparted this enthusiasm to his readers. He was an optimist in a period when nihilism was the order of the day; and he made men believe that things could be done for the sick, that diseases could be cured which most physicians thought incurable. He was a humorist, and he touched with color the dull but necessary facts and made them attractive. He was a scientist, but he knew how to clothe science in language which every man understands.

Some of his editorials were certainly rich in satire. I recall one written about a celebrated Philadelphia physician whose name I will not mention. It deserves reprinting, and, here it is:

"A distinguished physician in Philadelphia was arrested for fast chauffing, and despite his protestations locked up at the police station, while his class at college enjoyed a vacation. The papers fail to describe the scene at his trial, but an inti-

mate acquaintance with the city of 'brotherly hatred' enables us to portray it as it actually present.

"The magistrate was informed that the charge was fast driving an automobile. His Honor looked shocked. 'What? In Philadelphia?' The prisoner promptly denied the imputation of fastness.

"What is your name?' demanded the magistrate.

"_____, responded the prisoner.

"Hum,' mused the judge. 'A bad name. It carries with it the suggestion of rapidity, though not of aggressiveness I must admit.'

"But, your honor,' eagerly exclaimed the prisoner, 'I could not possibly have been fast. I was born and bred in Philadelphia, as were my ancestors, and have rarely passed the city limits, never those of propriety.'

"The frown on the judge's face lightened perceptibly. 'What is your occupation,' he asked.

"A physician,' responded the culprit, 'and a Professor in Jefferson Medical College.'

"That beats an alibi,' remarked the judge. 'No Philadelphia physician ever could have been rapid, least of all any Professor in Jefferson. But, let us examine a little further into this matter: Are you in favor of anesthetics in labor?'

"No,' responded the prisoner.

"Do you believe in nuclein, the sulphides, calcium iodized for croup?' 'No,' replied the prisoner, each time with increasing emphasis.

"Do you believe in intestinal antiseptics?'

"No,' shouted the prisoner.

"Do you prescribe the alkaloids?'

"NO' screamed the prisoner, growing red in the face from passion and astonishment.

"The prisoner is acquitted,' said the judge. 'The charge fails by its palpable absurdity. What the officer took for an automobile was the one-horse John on Master street. A commission *de lunatico*, will at once take up the case of the officer.'

"But, your honor,' said the officer, 'I have just come from Chicago, where—'

"The inquiry is unnecessary,' interrupted the magistrate, 'send him to the asylum at once. Any man who would leave Chicago to come to Philadelphia is *prima facie, non compos mentis*.'

Then, there was that editorial about active-principle medication, hung upon a story of every-day life. It brought home

a great truth to thousands of men in a way which they were bound to remember.

"Do you ever realize how antediluvian is our medical profession in many respects? How obstinate is the conservatism with which it clings to its customs and ideas, and stubbornly resists the impulse to progress? Just compare its queer old ways with those of the world in general:

"Mr. Grocer, I want a barrel of flour.'

"All right, Doctor, I will send it up. Five dollars, please.'

"Well, just take this.'

"Why, what's this rock, Doctor?'

"That's a piece of ore. I calculate that it contains about five dollars' worth of gold and silver, to say nothing of a little lead, copper and other metals that enhance its value. True, it may not contain anything of value; and then again it may be worth much more than \$5.00; but to the best of my belief, and I am a shrewd guesser, it is worth somewhere about \$5.00.'

"Very good Doctor, but we don't do business that way. When you have extracted the gold and silver, separated them, and the Government has stamped their value upon them, we will accept them at their value.'

"But this ore is Nature's combination; the metals in it are arranged by God's hand, and no one of the metals therein truly represents the ore or measures its value, which depends on the total values of all the various metals and other substances present.'

"Doctor, how many thousand years have you been asleep? Your slumbers must have begun before the dawn of history, before old Tubal-Cain broke up the harmony of God's creations by extracting metals from the ores.'

"But that's exactly what I do in dispensing my medicines, grind up roots, barks or leaves, exhaust them with alcohol, water, glycerin, etc., and give the whole dum business to the patient, gum, tannin, coloring matter, sugar, any old thing it may contain, for the sake of a little active principle that it may or may not contain.'

"Doctor, you are slandering your noble profession when you say you really attempt to treat disease with such uncertain crudities. Surely you have not loitered all these 10,000 years behind the mercantile community?'

"But is not this exactly what we have done? Truly, if a man pays his lawyer \$100 for advice as to his property, and the doctor \$1.00 for advice as to his health,

is it any wonder? Property rights, trade needs, all that appertains to the creation, securing and transfer of material values, have been ceaselessly elaborated and improved upon, as the advance of civilization rendered necessary; while the medical profession stands as to its *materia medica* where it did in the days of barter and exchange, before a circulating medium had been devised. Think of the man who would offer a 'concentration of all the metals from a pound of ore,' as a legitimate equivalent for merchandise.

"Did they crucify the first man who proposed pure gold, or silver, or iron, as a medium of exchange?"

"Don't be too all-fired ancient, Doctor. Try to catch up about 9,000 years. Ten centuries is enough to be behind the rest of the world."

Editorials like this burned themselves into the minds of their readers and effected a profound impression on their methods of practice. They brought home to many of us the vital truths of the active-principle method of medication. This was the great life work of Doctor Waugh. He believed that the alkaloids, given in "the small dose, oft repeated," were the solution of the great problem of therapeutic incertitude, which, after all, was at the bottom of the prevailing nihilism. He knew that if remedies which were active were given with a clear conception of how they act, in a common-sense kind of way, to meet definite indications, physicians would cease to be nihilists and would become optimists like himself. Combined with this, he emphasized certain very important therapeutic truths, the most important being the use of the sulphocarbolates as intestinal antiseptics (which he virtually introduced) and the significance of "circulatory equilibrium". With Doctor Abbott, he epitomized these teachings into epigrams which have become embodied into the subconscious mind of the profession. Who will ever forget such expressions as

"Clean out, clean up, and keep clean,"
or

"The smallest possible quantity of the best obtainable means to produce the desired therapeutic result."

Whether the professors, the leaders, the teachers, and the more scientific members of the profession know it or not, this

teaching has profoundly influenced American therapeutics and left its impress upon the manner in which most practitioners select their remedies.

And, all this was carried over into Doctor Waugh's books. The first of these, written before he became an active member of the CLINIC staff, was his "Treatment of the Sick". Although long since out of print, there still are hundreds of physicians who find this old book an invaluable recourse in time of trouble. It tells in a few words the thing the Doctor wants to know: how to treat his patient, and it tells him why. Much of this was later incorporated in two larger volumes, "The Textbook of Alkaloidal Therapeutics," and "The Alkaloidal Practice". While these books are not uniform in quality and interest, there are portions in them that read like a story, because they embody the vital, everyday experiences which Doctor Waugh lived and which he made live for other people.

But with all this—Doctor Waugh's brilliancy of intellect and his wide range of knowledge, his enthusiasm, his optimism, and his geniality—there was one thing that impressed me more than anything and that was, his kindliness of spirit manifest in everything he wrote, even in his satire. It was distinctive, and has been through all the years, as every old reader of CLINICAL MEDICINE knows. Doctor Waugh was one of the most human, in the best sense of that word, of editorial writers. He saw through the eyes of the average man, and put into words the kindly thoughts that appeal to the best in the hearts of most of us. This spirit impelled him to write upon topics which were foreign to the pages of most scientific journals. They were topics that appealed to manly men and womanly women, irrespective of their profession or circumstance of life. He thought that doctors, after all, differed in no sense from other human beings in their instincts, and their emotions. Therefore there was nothing remote about what he wrote. His pictures were close up. That is why his readers and his friends liked him. Another reason why they liked him was that in what he wrote, even when he was discussing purely medical subjects, he avoided the cold technicalities and that "appearance" of wisdom which confuses many and

impresses few, and injected into his work warmth, color and living interest.

Going over in my mind the great medical editors that I have known—and I have known many—I can think of a number who were possibly more brilliant, undoubtedly more “scientific” and erudite, and certainly more business-like than Doctor Waugh, but, I know of none who knew MEN better than he did, and who was able to convey that understanding through the editorial page.

We shall all of us miss him, and none of us more than those who have known him as a dear, devoted friend and co-worker.

We hope that all of you, old friends and new, will help us to hold aloft the torch which he lighted. With Doctor Abbott, Doctor Waugh gave CLINICAL MEDICINE a great mission. It is for us to “carry on,” and that means you, my dear reader, just as it means me.

ALFRED S. BURDICK.

Chicago, Ill.

DOCTOR WAUGH AS A TEACHER

Dr. William F. Waugh belonged to the old school. What I mean by “old school” is, that he had absolute confidence in definite therapeutics. This confidence was based upon a wide personal experience with his *materia medica*.

During the last twelve years, I was intimately acquainted with him. As a teacher of *materia medica* and therapeutics, he never failed to impress his students with the idea that the remedies he recommended had efficiency and potency in the treatment of disease. Each student felt that Doctor Waugh believed in every claim he made for his active principles.

That he had the courage of his own convictions, he demonstrated time and time again. He had tried out upon himself each and every remedy he prescribed, not only for its physiological effect, but, he had personally experienced the toxic action of those drugs which possess such action.

His optimistic outlook upon life, even up to his very last hours, was an inspiration to all those students who came into contact with him. He was tolerant to those who held views contrary to his own.

Not only the medical students but the general practitioners of America who have

received Doctor Waugh’s teachings for the last quarter of a century have sustained in his death a very great loss.

JOHN DILL ROBERTSON.

Chicago, Ill.

DOCTOR WAUGH AS A TEACHER AS HIS STUDENTS KNEW HIM

The science of teaching should be based upon a knowledge of the student and his fitness for his chosen profession. This knowledge Doctor Waugh possessed to a marked degree. His aim and desire was, to encourage those whom he saw were fitted to progress in their selected service to humanity. To him, the practice of medicine was a thing sacred, and not to be entered into lightly and unthinkingly. To him, it meant service to his God as well as to his fellow man.

A student, to fit himself for the practice of medicine, must have embodied in him certain fundamentals. To reach the standard that Doctor Waugh set before him and which he considered necessary for a practitioner, a student must, first of all, be a gentleman, gentle in the sense that he must be able to handle the most delicate and intimate relations in the lives of his patients. He must usher in the new life, must close the eyes at death, and give consoling comfort to the loved ones that were left. He must be a *man* in facing the various difficulties, where, hiding behind an untruth, would be easy and to stand in the open would be hard, but, the results for the patient would more than justify the stand. He not only must know medicine, but, he must have a store of information, to be able to help solve the problems his patients may bring, whether domestic, financial or even spiritual.

These are a few of the requirements that Doctor Waugh tried to instill into the minds of the student, not by eloquent oratorical lectures, but, by precept and example. By his own life and by his presence, the student recognized that a gentleman and a physician stood before him. Doctor Waugh was the type of a physician that one wished for his own family.

Of his brotherly love and innate gentleness, we would learn by a word dropped by chance when, perhaps, he would be giving the details of a case of some foreign

family in the slums of Philadelphia, while health-commissioner there, with some such remark as this: "And, gentlemen, the look of gratitude in that mother's eyes more than repaid me for the trouble I had in the case." To his patients, he gave of himself unstintingly and to his students he gave the benefits of his experience, and he left with them the thought that their work must be all in all to them and that their patients must be their first thought.

Why did the students love Doctor Waugh and why did they respect and reverence him? He came to them, *not* with the blare of trumpets, to extol his superiority, but, as a brother a little older in the fray, a little longer on the battleground, and by that token was enabled to reach out a helping hand, to point out the path to knowledge and to show them the various pitfalls into which they might fall. The student loved Doctor Waugh when in school and, later, when in practice. It was like a burst of bright sunshine from behind a dark cloud when, puzzled over a case, he would remember suddenly that Doctor Waugh had said: "I used this remedy for that condition and found it worked kindly." Oh, the comfort of that memory has made it a bulwark of strength, to which many a student can testify!

Nor can I pass over the other side of this great man without a word, namely, the companionship of Doctor Waugh. The pleasant hours I spent in his home and a week one time spent "in camp", those hours around the open fire, where we sat enchanted at the stories of his experiences and of his knowledge gleaned from a thousand sources—all these stand out in my memory as I feel a tightening in the throat that tells me how dear those days were to me.

Doctor Waugh has passed to his reward. The world has lost a great man, the students, a greater friend. May his mantle, like Elijah's, fall upon some young one among us! The world has too few of such men! May his memory always live!

ALFRED T. DAVIS,

Chicago, Ill.

FROM A FRIEND AND COLLEAGUE

With the passing of Dr. Waugh, the profession has sustained an irreparable loss. One of the old school of professional gen-

tlemen in all that the term implies, he was a safe mentor and guide for every medical man who regarded medicine as something above the sordid commercialism that pervades all human interests. Cultured, scholarly, and in my opinion one of the best therapists that America ever has produced, he will be sorely missed. Among all the physicians I ever have known, there is no more concrete example of all that the physician should be than was Doctor Waugh. Wise counsellor, loyal and steadfast friend of mine for more than a quarter of a century—words cannot express my consciousness of personal loss.

G. FRANK LYDSTON.

Chicago, Ill.

A TRIBUTE FROM TEXAS

Notice of Doctor Waugh's death came to me as a shock, notwithstanding the fact that I have known of his serious illness for some months past.

My really more than friendly relations with Doctor Waugh commenced nearly a quarter of a century ago and during a large portion of the time we were coworkers in the cause of more accurate therapy and in teaching the use of the active principles in the place of crude drugs or galenical preparations of crude drugs. Our friendship has only ended with his death; nevertheless, his memory will always be held in dear esteem by me.

Doctor Waugh had a lovable disposition and was at all times ready with earnest and learned counsel to aid the coming doctors in the difficult tasks before them as well as giving those in practice the benefit of his knowledge. His writings, which were voluminous, showed erudition, force and logic.

My sincerest sympathy is extended to his wife and family.

W. T. THACKERAY.

Fowlerton, Tex.

DOCTOR WAUGH AS A PATIENT

It is a little over a year that Doctor Waugh one day came to my desk and, by way of salutation, inquired: "Do I look like a man who has had the sentence of death passed upon him?" I started to turn aside the question with some half jocular remark, but, something in the doctor's at-

titude forbade. He went on: "They have just made a diagnosis of cancer." It seems that for some time Doctor Waugh had not felt well, indeed, had been losing strength and, on consulting some of his colleagues and friends, several enlarged inguinal glands were found as well as an enlarged prostate and certain rectal anomalies that aroused suspicion of malignant disease. The diagnosis was not final, however, and the doctor returned to his summer home in Muskegon, Michigan, near which, at Idlewilde, he was then staying.

Until that time I had known Doctor Waugh as a colleague; not very well, because of his frequent and continued absence from Chicago, but, always pleasantly. There had been some interchange of ideas, mostly concerning questions of editorial policy and contributions. He had asked me to lecture to his students on the subject most familiar to me and we had come in such contact as was natural under the circumstances.

After his return to Michigan, his hitherto frequent contributions to *CLINICAL MEDICINE* became less; instead, his letters told of increasing weakness amounting to debility. At times, much discouragement could be read between the lines.

Last December, Doctor Waugh came to Chicago and entered the Jefferson Park Hospital for observation, where he was under the care of Dr. John Dill Robertson. The latter and also Dr. G. Frank Lydston, who had been consulted some months earlier, took Doctor Waugh to Dr. Frank H. Blackmarr to ascertain whether anything could be done toward arresting the pathologic process by means of radium and x-ray treatment. In the course of a week or two, a marked improvement became manifest; the doctor became more cheerful and asked for something to do. Naturally, I had been to see him repeatedly, partly friendly visits, partly on editorial matters; when, finally, Doctor Waugh decided to move on the north side in order to be near to the *CLINIC* office—since he had to remain in Chicago anyway, being obliged to forego his annual flitting to the Gulf. He moved into an apartment in the same house in which I then lived in order to be near me.

After this, I saw Doctor Waugh daily, paying two and three and even four visits a day as his condition demanded, or as

his personal wishes seemed to indicate. The improvement that declared itself so surprisingly continued with a few interruptions through the winter. Of the interruptions, I may mention an attack of persistent and annoying hiccup which continued without remission for seven days, resisting every means and measure that we might advise toward its suppression. Several months later, a similar attack persisted for ten days. Strangely enough, the hiccup was apparently without reason and without leaving the patient appreciably weakened. Another intercurrent attack was one of profound toxemia giving rise to chills, vertigo, vomiting and desperate malaise. Fortunately, an energetic cleanout arrested this train of symptoms and, with the overcoming of the strain, Doctor Waugh regained not only a considerable degree of strength and good spirits but also his old love of work. He was untiring in his demands for it, asking for a stenographer almost weekly to whom he dictated many editorial and other articles as well as a goodly number of personal letters. It gave him great pleasure to read proofs for me, and he was happy in the consciousness of being of some service—to be not quite laid on the shelf.

During this time, he enjoyed occasional rides in the automobile, some of which took the direction of Doctor Blackmarr's office where he received x-ray treatment as often as it was possible to take him. The radium treatments were continued at his house, through Doctor Blackmarr's kindness who loaned the necessary material.

During this entire time, occasional intercurrent symptoms demanded attention, such as, failure of the liver to function, an ever-present tendency to constipation, the inability of the stomach to take care of solid food, and in part, no doubt, the various vagaries and notions that hardly can be dissociated from a condition of chronic invalidism. Fully realizing the seriousness of his condition, and while appreciating the purpose of his physicians who informed him that he was improving, he never lost sight of the fact that his trouble undoubtedly was malignant and that ultimately it would terminate his life. The only definite thing that he would admit was that apparently the malignant process

had been arrested. Yet, he was anxious to live a while longer, to continue in his very happy family life and among his friends who came to see him and who wrote to him.

During June and the succeeding months, a good deal of bladder distress appeared. For many months the use of the catheter had been unavoidable with the exception of a very brief time last spring. Under the circumstances, some infection could not be prevented, although this could be controlled by occasional washings of the bladder together with hexamethylenamine and arbutin. During August, however, this trouble became quite severe and, while some light remissions occurred, there never was a complete abatement; gradually Doctor Waugh lost strength to such a degree that the outlook became extremely serious and finally hopeless.

During the entire time of my attendance upon him, pain from the malignant growth happily was absent, except for occasional discomfort along the course of the descending colon where seemingly a small active process persisted. Nevertheless, it was found that sleep was unsatisfactory and was followed by a degree of mental torpor the next morning, unless it was induced by an opiate. If this was done, the patient felt refreshed and rested in the morning, often eating with appetite and enjoyment, until the very last few weeks.

Then, during the last few days when bladder distress was intense, there was really not much pain. The patient simply became worse generally, independent motion became impossible, and, finally, complete torpor and coma set in which closed the scene and rang down the curtain.

One outstanding feature that impressed me especially was Doctor Waugh's ineradicable optimism. There was no letup in his varying cheerfulness, in his kindly interest in the events and happenings, not only in the editorial offices, but, also and particularly in the world-war. Recent events cheered the patient more than anything else. He watched the progress of the American armies and their allies with the closest interest, reading eagerly four and five papers daily and commenting upon the successes, while every now and then

descanting upon the excellence of his own beloved American Navy.

A characteristic of Doctor Waugh's kindly, courageous nature was his frequent remark on greeting the writer: "Well, doctor, I have absolutely nothing to kick about." It was only during the worst and most distressful periods of the attacks of hiccups that Doctor Waugh lost patience, and then he declared humorously that the hiccup became less when he started to cuss.

Altogether, Doctor Waugh was a model patient, discussing his symptoms and any remedies suggested for their relief with objective interest and wisdom and submitting to all measures undertaken for his relief—even if they were unpleasant. With the utmost good nature, he offered the invariable remark: "Doctor, it is entirely up to you." I deemed it a privilege and an honor to be Doctor Waugh's physician in charge and only wish that it might have been possible to give him more relief than could be done.

One other point: Doctor Waugh was much cheered and pleased by letters that came to him from friends all over the country—some of whom he knew only through correspondence. It goes without saying that innumerable suggestions were offered; some "sure cures", remedies that were "quite certain to remove the trouble"—at least in the opinion of the writers.

While it manifestly was impossible to adopt every suggestion that was made, yet, they all were considered carefully, and Doctor Waugh and the writer had many interesting discussions as to the probable and possible action of some of the remedies suggested. Even if the adopted course of treatment had to be continued for good and sufficient reasons. Doctor Waugh deeply appreciated the kindly intention that prompted his many friends to offer advice.

H. J. ACHARD.

Chicago, Ill.

AN APPRECIATION OF DOCTOR WAUGH

I was horrified this morning on picking up my paper to see the announcement of the death of William F. Waugh, M. D. He was dear to us all and especially to those who had collaborated with him

alone the line of plant therapy. It seems too bad that such a useful life should be done so early. In his last letter to me, not long ago, he seemed full of pleasantries and much hope for the future. He has always been my nearest adviser and in my extremities has always had a cheerful word, while his council has kept me comfortable in these four years of great distress. A dear, good, kind and constant friend is gone. In my sorrow and bereavement I extend to his family my sincere sympathy and condolence.

G. L. B. ROUNSEVILLE.

Mattoon, Ill.

PERSONAL OBSERVATIONS ON CANCER

No clinical records compare in value with those made by physicians upon their own cases; which is well illustrated by what I am going to set down here. For, although, since my graduation in 1871, I have been quite a busy man as a clinician, student, teacher, and writer, I have learned so many things about abdominal cancer in studying my own case that I can not but think that some at least of our readers may get some instruction from this record.

I had had prostatic trouble for about two years, but, this is so common in men of my age (68 years) that it occasioned me no apprehension. However, along during the winter of 1916 and 1917, I noticed a growing debility for which I could find no adequate cause. This condition, I have always taught my classes, should arouse the suspicion of cancer developing in some one of the internal organs, especially the liver and those beyond the reach of physical exploration. Yet, this was merely a vague suspicion on my part.

In April, 1917, I left my Texas winter home and came north. Stopping at Chicago, I asked Dr. G. Frank Lydston to investigate my trouble. He at once pronounced it abdominal cancer. I was astounded! Doctor, you know yourself what that means. We all are aware that here and there people do have cancer; still, we look on it as a thing detached and remote. That we ourselves should be so affected, seems almost unthinkable. It took me six months to assimilate this idea.

Then I came to Chicago and placed myself under the care of Dr. Frank H. Blackmarr, whose remarkable work in treating

cancer with radium and allied agencies was attracting attention in the highest quarters. His success is due, not so much to the radium, as to the methods of application he has developed. Since beginning his treatment, the growth of the tumors seems to have entirely ceased and they have been retrograding in size. What is most remarkable, I have not suffered actual pain directly attributable to the cancer ever since Doctor Blackmarr took charge of my case.

However, there evidently is a progression in some respects, for, the following phenomena may be listed:

1. There has been increasing debility, until now I am not able to lift myself from a sitting position without the assistance of my arms to reinforce my tottering legs, and I can not rise from a kneeling posture without assistance. Just why debility should progress when its cause has improved, I do not know.

- 2.—The prostatic enlargement has diminished; however, I still am compelled to employ the catheter, and vesical stress comes on whenever I stand up. Slight catheter cystitis exists, as a matter of course.

Incidentally, here is an interesting observation: On riding to Doctor Blackmarr's office for treatment or to some other place, the vesical stress appears as soon as I leave the car. If, however, I place under the tongue, about three or four minutes before arriving, one granule each of glonoin (1-250 grain) and atropine sulphate (1-500 grain), I feel no discomfort.

3. The tumors seem to spring from the tissues of the back and do not affect any part of the digestive system (except, possibly, the liver). The inguinal glands on both sides are much enlarged and sections from one of these submitted to three pathologists gave the final certainty to the diagnosis.

4. Emaciation is extreme. I believe there isn't a particle of fat left in my body; and this occasions most of my suffering, since resting on the bare bony prominences is very uncomfortable. In fact, this appears to have set up a little periosteal inflammation in the left hip-joint. By shifting about from pillow to rubber ring, the annoyance is considerably reduced.

5. Whenever solid matter forms in the bowels, it occasions pain and distress by pressure on the carcinomatous masses, so

that elaborate and painstaking care is called for to keep the large bowel empty.

6. For months, desire for food has been totally absent. Food is taken perfunctorily, and then usually liquids alone; although I try to eat a little solid food, possibly half a cracker with each glass of hot salted milk, malted milk, junket or kumiss.

7. Of intercurrent attacks, the most dreadful were two of hiccup, one lasting a week, the other ten days, with hardly any intermissions; the paroxysms developing indiscriminately during sleep or when awake. They were simply terrible, resisting all attempts at alleviation, and once, the distress prompted me to beg Dr. Achard for euthanasia.

8. For some time, there were attacks of moderate jaundice, occasioning absolute nausea at the thought of food, but, these seem to have stopped.

9. There was one week of fever of medium intensity, apparently owing to fecal autotoxemia, and subsiding as this was remedied.

10. Twice there were attacks of vertigo, so severe that I was compelled to have my eyes bandaged, as I could not endure it when they were open.

11. Edema of feet and legs appeared, endured some weeks, then subsided, without apparent occasion either for coming or going.

12. The weakness has been most decided on the left side, especially in the left leg. This side, however, has been weaker than the other ever since an attack of yellow-fever I had at Rio Janeiro, while in the Navy in 1875.

13. The blood-counts have been excellent, the hemoglobin rising. Doctor Abelmänn gave five blood transfusions. Doctor Blackmarr put me on hypodermoclysis of sea-water.

14. For several weeks, I have been taking a single dose of morphine at bedtime, 1-2 grain. From this, I am getting remarkable results. Relief from discomfort is perfect and there are no unpleasant effects afterward. In former years, I used to take a fourth of a grain occasionally, to break up a cold, and this was always followed by a headache so intense that I learned to prefer to let the cold run its course. No unpleasant symptoms follow now. Quite often, after taking the dose, I dream of great eatings with a wolfish ap-

petite. Perhaps it is a turkey dinner with fixings or the steamed oysters we used to get for lunch at the old Astor House in New York. I am liable to feel hungry then, when I awake from such a dream, and, at any rate, my digestion is better the day after taking this dose of morphine. Several times the attempt was made to use other hypnotics in place of morphine, but, with so discouraging results that we have decided to stick to the latter. This is, of course, quite proper, because there can be no question of morphine-addiction in a case like mine.

15. I am troubled with heartburn and waterbrash. But, this is an old story and an inheritance. Bulkley, however, lays emphasis on this as a carcinoma-characteristic. Full doses of light magnesia give some temporary relief.

What the final result will be, I do not know. Doctor Robertson says I should have been dead months ago but for Doctor Blackmarr's treatment, and this I fully believe. My case seems to be a race between the retrogression of the tumors under radium and a still increasing weakness. I am taking a little hyoscyamine to soothe the irritable bladder, and this it does effectually. Even more effectual in this respect is cannabis indica, an excellent preparation of which was sent me by my old friend John Uri Lloyd. A full dose of this, however, occasions a very peculiar delirium, supervening during the sleep that follows.

The Psychic Element—I fear that this article would be incomplete without a reference to the very peculiar psychologic condition of this patient. How does it feel to be affected yourself with this awful disease? Well, I am as happy as the day is long! In fact this is the happiest period of my life since childhood. I have grown curiously emotional and the tears lie very close to the surface. My heart is constantly filled with gratitude to God for the blessings he has showered upon me. Everybody is so good to me. My family keep me enveloped in an atmosphere of love and devotion. Every need is gratified and every whim, of which there are many. Old friends and people I never heard of seem to vie with each other in doing me kindnesses, and the letters I receive are simply charming. They come from all quarters and even from Kentucky. Let

this be my acknowledgment since I am unable to reply to them otherwise.

WILLIAM F. WAUGH.

Chicago, Ill.

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[This account was written by Doctor Waugh about one month before his death.—Ed.]

NURSES ARE NEEDED

Surgeon-General Gorgas has called for 1,000 nurses a week, adding that by January 1 not less than 25,000 graduate nurses must be in war-service—in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service, and in Red Cross nursing. Obviously, this involves withdrawal of many nurses from civilian practice and, hence, necessitates strict economy in the use of all that will remain in the communities.

The physicians of America can help get these nurses for our sick and wounded men by:

Bringing this need to the attention of nurses; relieving nurses where possible, wholly or in part, from office-duty; seeing to it that nurses are employed only in cases requiring skilled attendance; insisting that nurses be released as soon as need for their professional service is ended; seeing to it that patients enter hospitals, instead of monopolizing the entire time of individual nurses; encouraging people to employ public-health nurses; instructing women in the care of the sick; inducing highschool and college graduates to enter the Army School of Nursing or some other recognized training school for nurses.

Encouraging nurses to go to the front involves real personal sacrifice and added work on the part of the physicians whose duty it is to maintain the health of our civilian second-line defense.

However, the men that are fighting for their country in France need the nurses.

DEPARTMENT OF NURSING, AMERICAN RED

CROSS,

Washington, D. C.

SPANISH INFLUENZA

If we may believe the newspapers, the pandemic of influenza which has swept over Europe during the last summer has at last reached the United States. We hear reports of the outbreak of the epi-

demic in Boston and of the appearance of the disease in many of our military and naval camps. Whether this is the genuine "blown-in-the-bottle" type of the disease, or whether Spanish influenza differs in any essential respect from the ordinary form, we are not now prepared to say. We leave the matter for the future, and the family of CLINICAL MEDICINE to decide.

The bacteriologic cause of Spanish influenza still is a matter of dispute. The prevailing opinion in Europe is, that the bacillus of Pfeiffer (*influenza bacillus*) is at least a factor in the majority of cases, but, in many instances observers have failed to find this organism at all. Some ascribe the disease to the pneumococcus, others to the micrococcus catarrhalis, still others to streptococci, while not a few believe it to be a mixed infection.

The symptomatology of the disease is briefly epitomized by Gotch and Whittingham, in *The British Medical Journal*, as follows:

"Incubation period one to two days. Duration three to five days, the five-day fever type being more severe and the casts found in the urine more numerous.

"The chief symptoms are: (a) Body pains, (b) malaise, (c) headache, (d) anorexia and constipation, (e) cough, (f) photophobia.

"The chief physical signs are: (a) High temperature with maximum reading on the second day, (b) tongue heavily coated, (c) acute pharyngitis, stomatitis, gingivitis, and conjunctivitis, (d) albuminuria with hyaline and granular casts.

"Blood counts show leukopenia with relative neutrophilia at the height of the fever."

As indicated above, kidney complications are rather common, albumin being present in 50 percent of the cases, and casts in 85 percent of the five-day type cases. The onset usually is very abrupt, while, in the majority of cases, the course of the disease is relatively mild. The death rate has been very small, although the mortality in cases in which pneumonia develops has been high. The temperature rises rapidly and usually is highest on the second or third day, 103° F. or more being common. The course of the disease averages about five days, although it is sometimes some-

what shorter. The pulse is relatively slow.

There is no general agreement as to the best method of treatment. Most observers, however, state that quinine is of no value and may be harmful, while decided relief follows the administration of aspirin, salicin and other salicylates. Since the disease probably is conveyed by the secretions of the nose and throat, washing out the mouth and spraying the rhinopharynx with antiseptic solutions are suggested.

So much for the reports. In view of the very remarkable success obtained by Woolley at Camp Greene, and by McCord, Friedlander and Walker at Camp Sherman with the Dakin antiseptics when employed for the prevention of meningitis, diphtheria and other diseases conveyed by rhinopharyngeal secretions, it is reasonable to hope that equally good success will attend the adoption of the same routine in Spanish influenza. In view of the rapidity with which this disease goes through a camp or community, the method deserves a trial and we urgently recommend it to our readers. The routine employed at Camp Sherman was, gargling or washing out the throat with a 0.25-percent solution of chlorazene, following with sprays of 2-percent dichloramine-T-chlorcosane solution to the nose and throat. By this medication, the upper air passages are kept constantly bathed with an antiseptic that can be depended upon to destroy any of these organisms and prevent their development—if anything will do this. The same treatment should be effective in modifying the course of the disease and in preventing its spread to exposed persons.

For the relief of pain, the aspirin as used in England and on the continent undoubtedly should prove effective. Decided relief ought to follow the use of the deferrescent compound (aconitine, digitalin and veratrine), while the use of iodized calcium, alone or in combination with calcium sulphide, by mouth, should inhibit the development of the disease.

Bacterin therapy should have both a prophylactic and curative value, and combinations of the influenza bacillus, pneumococcus, streptococcus, and the micrococcus catarrhalis have, we understand, been employed in Europe with satisfactory results.

Doctors should "soft-pedal" any panicky

feeling on the part of their neighbors. Spanish influenza sweeps through a community quickly. So does any other epidemic of colds. While the disease undoubtedly has a depressing effect, as is the case with the variety of grip with which we renew our acquaintance every winter, the mortality has been exceedingly small; in fact, Spanish influenza is not to be dreaded any more than American influenza, and, if people will learn to take reasonable care of themselves, to stay in bed if they are attacked, to keep the rhinopharyngeal passages clean and antiseptic, and avoid unnecessary exposure, and, particularly, guard against exposing others, they can feel reasonably sure of getting through the coming winter as comfortably as they did the last. Pneumonia is the complication to be feared; and, it is a frequent one, in this country.

Of course, we hope every reader of CLINICAL MEDICINE who has made the acquaintance of genuine Spanish influenza will tell us about it.

THE VOLUNTEER MEDICAL SERVICE CORPS

The Central Governing Board of the Volunteer Medical Service Corps of the Council of National Defense announces that the Illinois State Executive Committee of the Volunteer Medical Service Corps is comprised of the following doctors:

Carl Black, M. D., Chairman, Jacksonville.
Joseph P. Cobb, M. D., Secretary, 2811 Cottage Grove Ave., Chicago.
Clarence A. Earle, M. D., Des Plaines
A. Augustus O'Neill, M. D., 4607 Champlain Ave., Chicago.
William L. Noble, M. D., 32 North State St., Chicago.
Thomas J. Watkins, M. D., 104 S. Michigan Ave., Chicago.
D. A. K. Steele, M. D., 30 N. Michigan Ave., Chicago.
W. A. Evans, M. D., 7 S. Dearborn St., Chicago.
L. L. McArthur, M. D., 122 S. Michigan Ave., Chicago.

The purpose of this Committee is, to cooperate with the Central Governing Board in prosecuting all activities pertaining to the mobilization and enrollment of members of the Volunteer Medical Service Corps throughout the state.

The Central Governing Board of the Volunteer Medical Service Corps also authorizes the appointment of one county representative in each county in every state of the Union.

The Organization of the Volunteer Medical Service Corps enables the authorities

to mobilize to the best advantage all physicians of the country, in order to satisfy the requirements of the civil population, as well as those arising directly from the war. Physicians are urged to apply for membership in this organization.

A SERMON FROM THE "FIRING LINE"

The rain is falling monotonously. It is dreary without, but, seated in comfort by a bright light, I have been entertaining as well as instructing myself by reading *CLINICAL MEDICINE*, my old favorite and friend. It is a habit of mine at leisure moments to pull, at random, a number from the pile, and almost always I find it full of practical suggestions. Tonight, I happened to select the February, 1918, number, and soon received quite a pointed reminder of duty, in having failed to send in a report from the "firing-line", after the editor had accorded me the honor of editorial comment on my criticism of *CLINICAL MEDICINE*'s past status with its present, in reference, especially, to the dearth of clinical reports, with its former abundance and variety.

I was pleased to find that my little shell, cast at random, had evoked a response in kind from distant Canada. Though near to you, in Chicago, you must admit that from South Carolina to Canada is a long shot. I sincerely hope that it may promote thought and incite action in many others of the readers of *CLINICAL MEDICINE*. So many of us should feel under the obligation of gratitude to make a fair and just return in kind for the benefits received from it. Such a course would enrich the journal and also would add to the education, confidence, and self-satisfaction of the writers.

Brethren, let us wake up and realize that *THE CLINIC* is *our* journal! Let us, from our abundant experience at the bedside of the sick, enrich it with our clinical reports of "approved findings". A chance group of doctors rarely converse a brief time but that each one contributes much of value to each other out of the storehouse of mutual knowledge and experience. Just jotted down informally, this would make instructive reading for our brothers through the medium of *CLINICAL MEDICINE*. "But, I can't write, can't write well."

Nonsense, jot down the facts briefly and clearly, just as you would tell them to your medical chum, and the editor, if need be, not only will rewrite your articles, but, he will be glad to get them, too.

We are out on the firing-line in active daily personal contact with the enemy—disease—and have the advantage of the editor, who is confined to his desk, in seeing and doing all the little and the big things of the practice of "up to date" medicine, in verifying our themes and testing out crucially our knowledge in the fierce conflict with disease and death. Let me reiterate it. Let me proclaim it with the shell-blast of the clarion of truth, and let its glad sound penetrate to the farthest lands and the remotest recesses of our great America, and cross the oceans and reach every subscriber and chance reader on earth's farthest shores.

CLINICAL MEDICINE is preeminently and essentially *our* journal, is now and will be just what we elect to make it. Then, let each one of us feel and discharge to the utmost his personal duty and obligation as contributors to make it more and more the very journal we desire, the very mirror of the best thought, and the rarest and ripest clinical experience of the more than thirty thousand physicians that constitute the vast and widely diffused family of subscribers for *CLINICAL MEDICINE*. The peers of any, and practical progressive physicians that still believe "in drug-healing" and have not surrendered to Osler or the laboratory, that still have the temerity to believe that "there is a balm in Gilead" and still believe in the simple and humble office of the hyssop that springeth from the wall and in the paste of figs that healed Hezekiah's carbuncle.

L. B. BATES.

St. Matthews, S. C.

[Thank you, doctor! That is well put. We hope that many will respond. You are appointed a committee of one, to start the ball rolling with a clinical report.—ED.]

MOBILIZATION OF WOMEN PHYSICIANS FOR ANESTHETIC SERVICE

Every effort is being made to keep war surgery at top-notch efficiency and to provide every wounded doughboy with safe, rapid and comfortable anesthesia both at

the Front and in the Hospitals in "Blighty."

In this connection the following telegram is self-explanatory:

(Copy)

Washington, D. C.,
Sept. 18.

Dr. F. H. McMechan,
Avon Lake, Ohio.

Proceed at once to secure qualified women physician anesthetists under 45 years of age and of mental poise, as well as young women graduates who are competent for such service.

(Signed) Dr. Franklin Martin (per)

Dr. Emma Wheat Gillmore.

Chairman: Women Physicians' Committee,
Council National Defense, Medical Section.

Those women physicians who are qualified for anesthetic service or who are competent to be intensively trained are requested, at once, to get in touch with the undersigned.

F. H. McMECHAN,

Avon Lake, Ohio.

UMBILICAL HEMORRHAGE

To the general practitioner, umbilical hemorrhage of the newborn occurs but rarely, although a study of recent exhaustive literature upon this subject brings forward abundant evidence of the importance of definite care in ligating and, during the first ten days of infant-life, dressing the navel-cord stump.

The manner in which umbilical hemorrhage can be checked, even though no ligature is applied, is explained by Cullen in his "Diseases of the Umbilicus," on page 107, where we are told that "the inner longitudinal coats contract, after the cord is cut, and thicken; thus tending to close the lumen of the vessels."

Probably, were the cord bitten through, as is done by animals, rarely would an unligated navel-stump bleed dangerously: the severance of the cord with a sharp scissors, however, renders necessary its careful ligation, in order to protect the child.

The busy physician securely ligates the cord with "neverslip" ligatures, and feels easy in retiring from the bedside, so far as hemorrhage from the navel is concerned; but, widely gathered clinical data prove conclusively that the greatest danger from bleeding occurs from the fifth to the fifteenth day, and that it occurs from

causes not connected in any manner with the primary ligation.

As a primary cause of umbilical hemorrhage following the desiccation of the cord, a faulty condition of the blood and a pathologic condition of the vessel-walls (hemophilia) are first. Anemia in the mother, owing to any cause, to a certain degree, produced a like condition in the child.

Without any warning, the clothes are found soaked with blood. The most dangerous hemorrhage occurs at night, and the highest medical authority, based upon years of hospital observation in hundreds of cases, shows, how great is the danger to infant-life, in the statement that 9 out of every 10 of these little patients, whether in the hovel of the poor or in the mansion of the rich, perish.

Runge, in "Septic Diseases of the Newborn," says that septic diseases have been proved a direct cause of idiopathic bleeding at the navel. In his "Diseases of the Umbilicus," Cullen declares that our hope for the future seems to lie—in large measure, at least—in bringing about a coagulation of the blood. The condition, in some cases, at least, being analogous to melæna neonatorum, a practical line of treatment should be sought for in this direction.

From the writer's limited experience, he is assured that phosphorus 6x and 30x, given alternately every two hours, with a compress of hamamelis virginica applied to the bleeding navel, will render valuable and prompt service.

PROCAINE AND NOVOCAINE IDENTICAL

It appears that in certain quarters the attitude is taken that the local anesthetic sold as procaine is not identical with that marketed as novocaine. The Subcommittee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected, and, hence, offers the following explanation:

The monohydrochloride of para-amino-benzoyldiethyl-amino-ethanol, which was formerly made in Germany by the Farbwerke vorm. Meister, Lucius and Bruening, Hoechst a. M., and sold under the trade-marked name of novocaine, is now manufactured in the United States. Under

the provisions of the Trading-With-the-Enemy-Act, the Federal Trade Commission has taken over the patent that gave monopoly for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "novocaine" shall be called procaine, and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German novocaine, the Federal Trade Commission has submitted the product of each firm licensed to the A. M. A. Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell procaine:

The Abbott Laboratories, Ravenswood, Chicago.

Farbwerke - Hoechst Company, New York, N. Y.

Rector Chemical Company, Inc., New York, N. Y.

Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time, and have secured their admission to "New and Non-Official Remedies" as brands of procaine which comply with the "New and Non-Official Remedies" standards.

While all firms are required to sell their product under the official name "Procaine," the Farbwerke-Hoechst Company is permitted to use the trade designation "Novocaine" in addition, since it holds the right to this designation by virtue of trade-mark registration.

In conclusion, procaine is identical with the substance first introduced as novocaine. In the interest of rational nomenclature, the first term should be used in prescriptions and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing "Procaine-Abbott," "Procaine-Rector," or "Procaine-Farbwerke" or "Procaine (Novocaine brand)."

Julius Stieglitz, Chairman.

Subcommittee on Synthetic Drugs, National Research Council.

The official names so far adopted by the Federal Trade Commission are:

Arsphenamine for the drug marketed as salvarsan, diarsenol and arsenobenzol, and so on.

Nearsphenamine for the drug marketed as neosalvarsan, neodiarsenol and novarsenabenzol, and so on.

Barbital for the drug marketed as veronal.

Barbital-sodium for the drug marketed as medinal and veronal-sodium.

Procaine for the drug marketed as novocaine.

Procaine nitrate for the drug marketed as novocaine nitrate.

Phenyleinchoninic acid for the drug marketed as atophan.

AFTER-TREATMENT OF ALCOHOLIC DEBAUCH. CURE OF THE LIQUOR-HABIT

The craving for one more drink to taper off on is very interesting, especially so when the stomach is so irritable that nothing will be retained by it. The nervous system is also in this same sensitive condition, which results in uncontrollable restlessness and wakefulness.

To overcome these two conditions quickly, is of prime importance. In the first place, the patient should have absolutely no food or liquid of any kind, except cracked ice, which may be freely given until nausea and vomiting cease. Atropine sulphate, 1-250 grain, and cocaine hydrochloride, 1-64 grain, one granule of each every hour, also will help to relieve this condition. Then, for the restless and sleepless condition, there is nothing so soothing, and, in fact, acts so charmingly, as apomorphine hydrochloride, 1-64 grain, and hyoscine hydrobromide, 1-200 grain, given hypodermically. The patient will gradually quiet down and be asleep in about one-half hour. This dose can be repeated, if necessary, say, every six to twelve hours. This excellent bit of practice was called to the attention of the profession, by Dr. C. J. Douglas, in *The New York Medical Journal* for December, 1917.

These same remedies should be given by mouth, also: the granules of hyoscine hydrobromide 1-1000 grain, and of apomorphine hydrochloride, 1-64 grain, one of each every two hours, so as to keep up the effect of the hypodermic medication. In any degree of delirium, this combina-

tion of drugs will give quick relief. It will not cause any vomiting when the apomorphine is given in the small dosage named.

After the stomach is somewhat settled, the nurse is instructed to put a dash of red pepper in a cup of hot milk or broth and to give as much every two hours.

The following will soon help to overcome the desire for liquor:

Extract of nux vomica.....gr. 1-4
Powdered capsicum grs. 2
Put into a No. 1 capsule and dispense
24 such.

Directions: Take one capsule three or four times a day, after taking nourishment.

In a few days, the craving for food instead of liquor will be manifested. It is, however, absolutely essential that the bowels be thoroughly evacuated just as soon as possible by means of an enema and a dose of a laxative saline.

A. S. TUCHLER.

San Francisco, Calif.

FROM A PHYSICIAN'S WIFE

I take much pleasure in reading CLINICAL MEDICINE and I get many good things out of its columns. Now I will try to give you a little of my experience since my husband enlisted early in May of last year. I must admit that I did not think it necessary, he being too old to be called, while his going left me alone. He had a practice that brought him much more than would his salary. We are so prone to think of the dollar! But, when it came to the test, I could not say, "Don't go." I have helped him a great deal, so, was not ignorant about his business, as many women are. I decided to go to nursing and giving massage and vibratory treatments, with an apparatus I had represented before, and, in this way, I have helped several sufferers to get well, have kept busy, and saved \$200.00 with which to buy bonds of the third Liberty Bond issue.

I should like to tell you of some of my patrons, but, that does not come in here. I work in the Red Cross, look after our grove and other property, and help some

who are less fortunate than I. Taking everything I have to do, I do not have time to fret or get lonesome, however, when I do get lonely, I pick up something to read or to commit something good to memory. I also may take a walk with my dog which was devoted to Doctor. This morning, he killed the second skunk that has been after our chickens since last fall, when we went out at 3 o'clock in the morning to get that one, it having caught some of our chicks. For this second one, I had to tear up part of the garage-floor. Poor Tango got badly bitten, so, his nose is swollen. He shook that skunk just as I should delight seeing the Kaiser shaken.

I think that, so far as I am concerned—that is, taking care of myself and keeping "the home fires burning," Doctor does not worry one bit. He feels that I am doing the right thing, as I now feel that he did by going early. I venture to enclose a selection Doctor sent me, saying, he thought it very applicable to me.

I thought to miss you all the while—
Your comprehending eyes, your voice, your smile;

I steeled myself to know you far away,
And, lo, you are more near than those who stay.

I feel your presence through the toilsome hours,

Lending your strength to supplement my powers;

Almost I touch you when I stretch my hand,

I feel your kiss—dear, do you understand?

Space cannot part us, we, who have one aim,

Two who have sacrificed in Freedom's name,

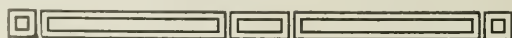
But, those at home that boast no Service Star,

How far away they seem—how far, how far.

MRS. O. L. CALLAHAN.

Sorrento, Fla.

[Our correspondent has solved her problem beautifully and we offer our congratulations. No wonder, the doctor thinks that poem especially suited to her. We should like to hear from other physicians' wives, also.—ED.]



In the World War

LETTERS FROM FRANCE—III

The report, for May, of the military-affairs department of the American Red Cross shows a great increase in the number of hospitals built and supplies furnished. Hospital No. 5, with 600 beds, which was opened on Decoration Day, is now running to the limit of capacity.

The big offensive is having its effect in all the hospitals. A new hospital of 350 beds has been opened at "somewhere in France", on the battle-line. Through this hospital, all American base hospitals thus are constantly under American medical personnel. American nurses, assisted by French-speaking American girls, have been placed in every French hospital where it has been reported that wounded American soldiers have been sent.

Six new hospitals immediately back of the active fighting-zone will soon be installed. A new hospital for the civilian population has been opened, at "somewhere in France", for the prevention of contagious diseases, which might spread to our troops.

During the month, the army has been supplied with 213,908 splints and 200 artificial limbs. During May, the French hospitals alone have been supplied with 35,900 pieces of underwear, 17,000 pairs of socks, 23,000 handkerchiefs, 13,500 towels, 4,000 pairs of boot, 11,500 pairs of slippers, 675 sweaters, 900 blankets, 145 beds, 185 mattresses, 1,800 pillows, 2,700 pillow-cases, 3,000 sheets, 7,500 tooth-brushes and 31,000 surgical dressings. It is impossible, as yet, to give any accurate figures of the quantities of supplies of all kinds distributed to the American troops and hospitals during this last offensive, as the staff in the field warehouses has been overwhelmed with work.

The reports concerning the personnel of the American Red Cross Military Hospital No. 1 having been gassed are unfounded. Several cases of grip among the nurses and

auxiliaries were reported last week. Mrs. George Munroe was absent for a few days and it was thought there was an epidemic of grip in the hospital. It was afterward decided, however, that the sneezing and slight inflammation of the eyes was caused by the handling of clothes of soldiers who had been gassed, but, no serious cases were reported. No soldiers suffering from poison-gas have been brought to the Neuilly hospital recently.

Lieutenant-Colonel Bingham, of the U. S. Army Medical Corps, who has charge of the American military hospitals in the Paris zone, says that practically all of the gassed patients were being taken to the new Auteuil hospital, while Hospital No. 1 in Neuilly and Major Blake's hospital (No. 2) were handling the surgical cases. Both have greatly increased their number of beds. The Neuilly hospital, which reduced its number of beds to 700 a few weeks ago, now has 1,000 beds again, and Dr. Blake's hospital is likewise filled.

The big seminary in the Place St. Sulpice is put to a new use. It is for refugees, poor and unfortunate men and women driven from hearth and home by the unspeakable Hun and forced to flee for life and safety to parts of France where the sword and the torch have not yet invaded.

As a rule the Secours is not for keeping people in Paris. It is a sort of a halfway house for those passing through Paris on their way to settlements prepared for them. As you enter the quadrangle of the building, you see what was once a seminary, afterward a garrison, and now a refuge. You see heads of men and women popping out of windows, in some of which clothes are drying; also children, principally very young ones, playing about the courtyard. The quadrangle looks something like a collection of cafés, chairs being arranged in little squares for receiving the refugees. The colonnades are chalked with notices such as "*Voyageurs pour Orléans*", "*Voyageurs pour P. L. M.*", "*Voyageurs sans*

Destination", and so on. These are *les rendez-vous*. Behind the colonnade, are bags and sacks of every description, mostly of the homemade variety—bicycles, baby-carriages, baskets, pillow-cases stuffed with clothes—are piled up ready for the next outgoing train.

Accompanied by Mr. du Bellet, of the American Red Cross, a visit was made to the various wards and passages where beds stood ready for occupants. All was clean and the air was circulating freely. Perfect order and system prevailed.



Copyright: International Film Service.
Dr. Joseph Blake in his office in the American Red Cross Hospital in Paris.

Everyone had something to do, and did it. Every corner of the seminary was put to some use. The chapel, for instance, was a vast wardrobe, where clothing of every kind, consisting of worn clothes given by sympathizers, was ready for distribution. The clothes are assorted in one room, cleaned in another, then mended and ironed, and placed in readiness for the refugees. They come, for the most part, at night, and they must be fed, cleaned, clothed, and housed, and then sent on their way. Last week, as many as 5,495 refugees were received at the Secours and given every hospitality while waiting for their trains to leave.

The refectories are worth seeing, especially when crowded with men and women and children. The food is of excellent quality, and includes soup, meat, vegetables, and bread, while beer and other refreshing drinks also are served. The "Oeuvre" really was founded by Messrs. Peltier and Lacote, but, latterly the American Red Cross has come into the combination and developed the Secours in that

methodical and lavish way common to that great American war-charity. The Red Cross is represented by Messrs. Bernard and du Bellet, and the latter's experience as former Consul at Rheims is much appreciated at the Secours.

The American Red Cross has just been installed in the Palais Eynard, one of the most beautiful historical buildings in Geneva. It is loaned by the local authorities.

The committee consists entirely of well-known American residents in Geneva. The president is Mr. Stephen Mac Fadden, the vice-president, Dr. Charles Cumston, and the treasurer, the Rev. C. Belden, of the American Church. The Americans will aid the sick and wounded of all the Allies, also the Swiss. Later, American officers and soldiers broken down in the war will be cared for.

In addition to the work accomplished by the military-affairs department of the Red Cross during the month of May, there has been completed a recreation-station at "somewhere in France", a barracks station



Copyright: Underwood & Underwood.
Wounded Red Cross Dog having his injuries dressed.

for the camouflage service at "somewhere in France;" an infirmary for officers and a recreation-station have been inaugurated, and a club for air-service officers has been established at the front.

In the field with army units, there are now operating three large bathing- and disinfecting-plants, seven large mobile laundry-plants, and five stationary laundry-plants. There are, also, five trains of mobile field-kitchens and four French-type



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Post Exchange at Camp Meade, at Admiral, Md.

field-kitchens, which are rendering an excellent service. Six large mobile ice-manufacturing plants have also been established, as have forty portable shower-baths and one dental ambulance.

The Hospital and Home Communication Service reports that it has now 68 representatives working with the troops in hospitals. During the same month, 1,926 requests for information about missing and wounded soldiers have been received and 1,858 reports have been made. Many photographs of American graves have been taken, which enables this department to render the greatest personal service to the mothers at home. The Home Communication Service is rapidly developing the personal side of the work, which hitherto has been lacking. The personal demands from patients in the hospital have greatly increased recently, and these small requests are being promptly attended to.

The American Red Cross Military Hospital, which was built as the Auteuil Hos-

pital, completes the chain of the American military hospitals in or near Paris. It is Hospital No. 5 of the Paris zone. Hospital No. 1 is the former American Ambulance at Neuilly. No. 2 is Dr. Joseph A. Blake's hospital in the Rue Puccini. No. 3 is the former American Girls' Art Club in the Latin quarter, which was given by Mrs. Whitelaw Reid. No. 4 is at Juilly and was formerly Mrs. Harry Payne Whitney's hospital attached to the American Ambulance. All are now operated by the medical corps of the United States Army, under the supervision of Lieutenant-Colonel Bingham, and are furnished with supplies of all kinds by the Red Cross.

The Auteuil hospital, No. 5, is the only new one in the chain. It is a tent hospital that can be loaded on trucks and moved at a few hours' notice, though it by no means is considered a temporary affair. The tent wards are well constructed and are as comfortable as the wards in any permanent hospital, and preparations are already being made to maintain the hospital in the winter. The men that have recently been

brought in from Chateau Thierry say that they are better contented in tent wards or, more often, in the reclining-chairs between the tents, with the beautiful surroundings of the Bois, than in any of the stationary hospitals.

This tent hospital was originally intended for sick patients and not for surgical cases; but, the pressure has been so acute recently that it has been decided that cases of every kind are to be accepted there. It was first equipped with 600 beds, 24 beds in each ward; but, it has proved so entirely comfortable and has relieved the pressure on the other hospitals to such an extent that 1,000 beds now are being installed. At present, about 500 patients are being cared for, the majority of them suffering from poison-gas, while new ones are arriving daily. Major Tenowsky is the chief surgeon. The personnel is being increased as the units arrive from America. The American Red Cross erected the hospital in record-breaking time, as it was just twenty-five days from the time that the first tent was put up until the first patients were received.

The operating-rooms are steam-heated and have every convenience. There is a perfect x-ray plant, a sterilizing and fumigating plant, a splendid kitchen, and bath-rooms and shower-baths are rapidly being installed.

The old betting-booths looked queer, stocked with clothes and other Red Cross supplies; no more so, though, than did the men, in their pajamas reclining and roaming about on the grass of the one-time famous race-course. They were telling of their experience of only the week before at Chateau Thierry, but, said they had almost forgotten they had been in the war since they had been in the peaceful Bois de Boulogne. Many of them had seen the Auteuil course before, however, under quite different conditions.

B. SHERWOOD-DUNN.

Paris, France.

OF INTEREST TO HOLDERS OF LIBERTY BONDS

When the third Liberty Loan bonds were issued last spring, the interest was fixed at $4\frac{1}{4}$ percent, while the first and second

liberty loan bonds yielded only 4 percent interest. The holders of the 4-percent bonds, however, had the privilege of exchanging these into those bearing $4\frac{1}{4}$ percent, thereby benefiting from the more favorable rate of the later issue.

The government bond department of the Federal Reserve Bank of Chicago announces that only about \$95,000,000 of the 4-percent Liberty bonds have so far been presented for conversion into $4\frac{1}{4}$ -percent bonds and that only about one-fourth of the holders of 4-percent bonds have taken advantage of the opportunity to secure an additional $\frac{1}{4}$ percent on their investment.

The privilege of this conversion expires on November 9, 1918, and the 4-percent bonds of the first and second Liberty loans can not be converted into subsequent issues of United States bonds that may be issued at a higher rate. Holders of the 4-percent Liberty loan bonds, therefore, are urged to present them for conversion, in order to secure the additional interest. It is best for bondholders to arrange for the conversion of their bonds through the bank that handled the original subscription; still, those who have changed their place of residence can, without doubt, handle the matter through any convenient bank.

In connection with this subject, we wish to express our hope that physicians who have purchased liberty bonds, no matter of what issue, will not use them as negotiable papers or, at least, will not sell them. This for several reasons. For one thing, the throwing of a large number of these bonds upon the market very naturally will depreciate their commercial value. Then, it was intended that the liberty bonds should be bought by the people, not merely to furnish the government large sums of money for the purpose of carrying on the war, but, also, in order to make available to the mass of the people an opportunity of investing their savings at the favorable interest rate, and—what is most important—with the absolute assurance that they will not lose their investment. We can hardly imagine a safer investment than the buying of government bonds, since there is virtually no possibility that the government of the United States ever will be unable to meet its obligation.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

(Continued from August issue, page 634)

BEAR in mind two things: first, that prostitution in most of the states in the Union is not an offense at law, and, next, that the tendency of these women is, to congregate, to huddle together within a definite radius or neighborhood. Thus we have in all our cities a large number of women for hire grouped in what are known as "red-light" districts. This fact could be accentuated by municipal enactments that would make it an offense for any such house of ill-repute to be kept outside these particular, designated districts, and congregations should be converted into segregation; and this would make it comparatively easy to institute such supervision as a board of health lawfully and properly may exercise. If every physician were obliged to report every case of infection coming under his charge, it would be possible in almost every instance to locate the place of its origin and then to place the taintress in a hospital, one especially designated for that purpose. There is just as much reason—yes, far more—for so removing an infected or infectious woman as there is for removing a person having smallpox. I say, more, for, the infections through this cause are a thousand times more numerous and the peril far greater than for any other diseases.

Having smallpox is not an offense at law, either, nevertheless, those who have it can be, and are, restrained of their liberty, for the general good. Where is the essential difference? From the common-sense point of view, there is none. From consideration of public health many times more farreaching, the tainted woman should be summarily restrained just as any other infected person is; more promptly, even, if possible.

It is absolutely illogical to leave such a woman at liberty, to go on spreading disease, while those having other diseases, innocently acquired, are being isolated. It

is nonsense to quote her constitutional right to personal liberty and the pursuit of happiness, when her liberty and pursuit are inimical to public health. The smallpox victim would get little sympathy for that plea. Why should the harlot? There is another thing to think of: if men were obliged to declare their associated culprits, the effect must operate as a deterrent, at least in some degree. If the associate culprits know they are going to be sequestrated, they will, in mere self-defense, at least endeavor to keep themselves clean.

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These are not nice things to talk about; but, then, the whole subject is filthy as well as sinister. That is why it should be faced squarely and the means of sanitation found and applied. We are considering how to deal with and minimize the most disgusting, insidious, degraded, and degrading of diseases, and are speaking of them as diseases and disease-questions, merely, leaving aside all their other aspects. Public health not only, but, health in the home, the lives of women and children, are in the balance, and there needs no timidity of dealing. A broad duty lies here; and, as having to perform it, plain speech is necessary.

I would go further; I should recommend that male patients be kept, so far as possible, under restriction until they are cured and it has been proven that they no longer can impart disease to others. To restrain his associate culprit and have the man free, would be to stop half way. An act of manifest negligence that would permit freedom, with all its potentialities of harm, to the really dangerous agent of contagion.

There is nothing in this suggestion that could not be wrought out to practical form by additions to the laws that protect public health, and additions to the powers and duties of health-officers. We have ample enactments—federal, state and municipal—for protecting the public against impure foods and drugs. Is it squeamishness

or a fear of seeming to sanction libidinous traffic that might withhold enactments against this infinitely more deadly poison? Why not see it for what it is and make laws to meet it?

I tell you again, it is first and last a disease-evil, and the question is a health-question. It never can be successfully coped with in any other understanding.

Such a system of regulation would bring the scourge down to its irreducible minimum; but, alas! it would leave untouched clandestine prostitution, one of the worst forms. That form is beyond control. It is today the secret curse of Great Britain and an agency of dire effect here in our own country. Twenty-five years ago or thereabout, the British parliament passed an act bringing houses of sex-barter under police and health control. The direct purpose of this act was, to protect the army and navy, whose hospitals were for the most part filled with venereal cases. In its short life, this law worked wonders for the men of both branches; however, it aroused such a storm of puritanical protest that it had to be repealed, and was replaced by one abolishing all such houses. Today, there is not so much as one bawdy-house in all the kingdom, but, clandestine prostitution penetrates everywhere, and in no country is there more rampant sex-disease. The music-halls, many of the public houses—bar-rooms we call them—and certain streets, squares, and theaters swarm with women who ply their trade individually. These women—of various grades, from the educated and well-seeming, to the most repulsive outcasts—have dwellings of their own, scattered almost indiscriminately throughout the cities, and they never are interfered with. The fact of their profession being ignored by law, leaves them in freedom to canker society at large, with results that are both horrible and astounding. In our own cities, there are laws against public solicitation, but, no such law can do more than impinge the outer rim of this vicious circle, and the fugacious method of the traffic would tend to keep it out of reach of any system of regulation that could be framed short of one that would create a special police and impose severe penalties, though not by fine.

Another process of abatement, which I have named the educational, already is

among the things advanced by the medical profession. The American Society of Sanitary and Medical Prophylaxis has taken it up, and many physicians are promoting it in their own practice—I might say, all. I would earnestly advise every man and woman who has the welfare of the race and nation at heart to join that society and help in organizing local branches.

Herbert Spencer, in his essay on education, gives first importance to that knowledge which relates to self-preservation or the maintenance of life and to that which relates to self-perpetuation or parentage. "Strangely enough," he says, "parents and schoolmasters take no care whatever to prepare the young for the position of parents." That is a first step, but, in taking it, we are confronted by what has been called a "conspiracy of silence." A conspiracy against, not only proper and necessary preparation of the young for the facts of life, but, against the whole subject, as one improper to be canvassed openly.

One of the most deplorable results of this reticence is, the abundance of quack literature directed to and operating upon the fears of boys and young men. Millions of dollars have been taken by the unscrupulous persons who are engaged in this criminal and especially detestable business, and incalculable harm has been done. This is one of the first things to be attacked. I am not going to take time to go into details, but, it is safe to say every man who retains at all a memory of his teens can recall experiences of his own that will point my meaning. I am glad to be able to say that all reputable publications have barred advertising of this kind from their pages, yet, there still remains an endless chain of lists of names by means of which impure and vicious printed stuff is sent to boys through the mails. It is the obvious duty of every father and mother who finds any of this stuff mislaid about the house to notify the postoffice authorities at once, and to help to have it stopped. Such finds will not be frequent, for, almost invariably the application is made in secret or under a false name. I do not advocate espionage, still, I do advise an outlook for things of this kind.

I do not advocate sex education in the home further than it is normally practiced

in all sensibly conducted families. but "good education is better than bad," and the bad is sure to be acquired. Therefore, let us attempt to substitute the good.

A knowledge of the risks of disease by sexual indulgence, both in and out of marriage—and, indeed, apart from this altogether—is a stage of that sexual education which must begin, so far as the elements are concerned, at a very early age. Information about venereal disease should not be given until adolescence. It is unnecessary and undesirable to impart medical knowledge to young boys and girls and to warn them against risks to which they are as yet little liable to be exposed. It is when the age of strong sexual instinct, actual or potential, begins that the risks under some circumstances of yielding to it need to be clearly present to the mind.

No one who reflects on the actual facts of life ought to doubt that it is in the highest degree desirable that every adolescent youth and girl ought to receive some elementary instruction in the general facts of venereal disease, tuberculosis, and alcoholism. These three "plagues of civilization" are so widespread, so subtle, and so manifold in their operation that everyone comes in contact with them during life, and that everyone is liable to suffer, even before he is aware, perhaps hopelessly and forever, from the results of that contact. Vague declamations about immorality and still vaguer warnings against it have but little effect and possess no meaning, while rhetorical exaggeration is unnecessary. A very simple and concise statement of the actual facts concerning the evils that beset life is quite sufficient and adequate and quite essential. To ignore this need, is only possible to those who take a dangerously frivolous view of life.

It is the young woman as much as the youth who needs this enlightenment. There are still some persons so ill-informed as to believe that, though it may be necessary to instruct the youth, it is best to leave his sister "unsullied," as they consider it, by a knowledge of the facts of life. This is the very reverse of the truth. It is desirable, indeed, that all should be acquainted with facts so vital to humanity, even although not themselves personally concerned. The girl, however, is even more concerned than the youth. A man has the matter more within his own grasp, and, if he so chooses,

he may avoid all the grosser risks of contact with venereal disease. It is not so with the woman. Whatever her own purity, she cannot be sure that she may not have to guard against the possibility of disease in her future husband, as well as in those to whom she may entrust her child. It is a possibility which the educated woman, far from being dispensed from, is more liable to encounter than is the working-class woman; for, venereal disease is less prevalent among the poor than the rich. The careful physician, even when his patient is a minister of religion, considers it his duty to inquire whether he has had syphilis, and the clergyman of most severely correct life recognizes the need of such inquiry and seldom feels himself insulted.

It must be clearly understood that these talks are of medical, hygienic, and physiological character; they are not to be used for retailing moral platitudes. To make them that would be a fatal mistake. The young often are very hostile to merely conventional moral maxims and suspect their hollowness—not always without reason. The end to be aimed at here is enlightenment. Certainly, knowledge never can be immoral; however, nothing is gained by jumbling up knowledge and morality together.

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In emphasizing the nature of the physician's task in this matter as purely and simply that of wise practical enlightenment, nothing is implied against the advantages and, indeed, the immense value in sexual hygiene, of the moral, religious, ideal elements of life. It is not the primary business of the physician to inspire these, but, they have a very intimate relation with the sexual life, and every boy and girl at puberty (and never before puberty) should be granted the privilege—not the duty or the task—of initiation into those elements of the world's life which are at the same time natural functions of the adolescent soul.

Here, however, is the sphere of the religious or ethical teacher. At puberty, he has his great opportunity, the greatest he can ever obtain. The flower of sex that blossoms in the body at puberty has its spiritual counterpart which at the same moment blossoms in the soul. The churches, from of old, have recognized the re-

ligious significance of this moment, for, it is this period of life that they have appointed as the time of confirmation and similar rites. With the progress of the ages, it is true, such rites may, to some, become merely formal and apparently meaningless fossils. But, they have a meaning, nevertheless, and are capable of being again vitalized. Nor in their spirit and essence should they be confined to those who accept supernaturally revealed religions. They concern all ethical teachers, who must realize that it is at puberty that they are called upon to inspire or to fortify the great ideal aspirations which at this period tend spontaneously to arise in the youth's or maiden's soul.

This great fact of life—which nature has commanded and in the beasts is mere brutal instinct, which in man has uprisen into love, giving us hope by this rising from the dead that love is the revelation to man of the nature of the Deity—must be acknowledged to be divine, and not bestial. When once this truth shall be believed, then no father will let his son go into the world untaught at home; but, he will himself teach him the greatest of the miracles of life, how a brute fact has been made holy. The son will go forth then conscious of all the obligations of love, taught to live a clean life, such as he believes his mother and sisters lead, such as he will demand of the girl he is to marry. And, with cause for thankfulness and praise, the father will have the joy and gladness that come from having done his duty.

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Above all things, if we are to make headway against this monstrous enemy, side considerations must be left out, and widely organized effort toward regulation and education must be brought into force. Again I emphasize it as a disease-evil, distinctly so. Moral effort is well enough,

and, if those who can not bring themselves whole-heartedly to combating it as a disease-evil wish to employ their forces in moral suasion or to counsel for the young, will get together with their clergymen to that purpose, they may develop an auxiliary form of aid that would be valuable.

Any attempt, however, to separate morality from sensuousness will not accelerate development, but, only retard it, since the transplantation of sexual emotion to a soil other than that of the senses is an impossibility in our present earthly conditions. The demand for purity which aims at nonsensuousness or supersensuousness may, perhaps, provide protection from minor dangers; in great ones, it will be as futile as a hedge against a forest fire.

No obstructing of appetite, but, only their relief in other directions can really purify them. Passions can be curbed only by means of stronger passions. In the same appetite and the same passion in which the danger lies, in the instinct of Love itself, we have the true starting-point for it. He to whom the destruction of this instinct is a passionate desire possesses in this passion itself a prospect of attaining his unnatural end. He, again, who does not wish to kill, but, only to control the sexual instinct will become, in his struggle against this desire, still immeasurably stimulated through heredity and social custom, a strong and proud conqueror when he imagines and finally experiences unity in love. The prejudice originally fostered by Christianity, that sexual purity is, in itself, so great an asset of life that it outweighs the sacrifice of all others, this prejudice must be overcome. A person is estimable for sexual purity only to the extent to which it fits him to fulfil the purpose of life for himself and for the race, that of leading an ever higher life.

[To be continued.]



Among the Books

SADLER: "LONG HEADS AND ROUND HEADS"

Long Heads and Round Heads, or, What's the Matter with Germany. By William S. Sadler, M. D. Illustrated. Chicago; A. C. McClurg & Co. 1918. Price \$1.00.

It is curious to find how very differently two persons may be impressed by the same thing. Thus, we read Madison Grant's "Passing of the Great Race", and our verdict was, "It was a mighty good thing for humanity that that race should pass out." Doctor Sadler, however, adopts Grant's views without any reserve. Moreover, by a most remarkable mental somerserset, he blames it all upon "the Alpines, an inferior, stupid, and nonprogressive race with an inherited tendency to cruelty, wickedness, and with no more morals than a wolf." He holds that this people has forced the Nordics to become their masters and leaders, and are, therefore, responsible for the crimes that have aroused the entire civilized world against Germany.

Now let us look into this matter a little: Under Rurik, these Nordics conquered Russia and reduced the entire Slavic people to slavery. As the boyars, they kept the Slavs in serfdom until late in the nineteenth century, long after such a condition had ceased throughout the rest of the world. Since the alleged emancipation, this slavery has continued, with little real modification, under the rule of the Tschinn. As Saxons, they raided Britain, finding that island flourishing under the civilization of the Romans. This, the invaders were no more capable of appreciating than a pack of wolves. They sacked and burned the Roman villas and in the ruins erected their rude huts. The inhabitants they found there they simply exterminated, as the gardener does the weeds. Later, when some degree of culture had been absorbed, the Saxons were, themselves, raided by some subsequent swarms of these same Nordics, under the names of Danes, Northmen,

and Vikings. The latter carried on their incursions along the entire European coast, as far as Italy, sailing up the rivers and committing such frightful atrocities as to induce the insertion in the Litany, of the piteous appeal, "From the fury of the Northmen, good Lord, deliver us."

This fierce and merciless race, according to Sadler, now is compelled by the peaceful, rather sluggish Alpines to carry on the present war with a frightfulness that would make Tamerlane or Attila blush at his ineffectiveness as a horror-producer. We very much fear that Doctor Sadler has taken a hurried measurement of his own cranial angle and, finding himself dolichocephalic, tries to excuse in himself the crime of his own existence.

We freely forgive him, however, because he has given us a mass of valuable data, taken from the speeches and writings of Nietzsche, the Kaiser, and other Teutonic madmen. It might have been well if this material had been published in such a shape before the war began. We should like to say, "I told you so," but, unfortunately, we didn't. Years ago, we had an uneasy feeling that there was possibly a world-danger in our tacit assent to the German claims of supermanhood, but, we didn't come out and say so.

W. F. W.

MORRIS: "THE WAY OUT OF WAR"

The Way Out of War: Notes on the Biology of the Subject. By Robert T. Morris, F. A. C. S. Garden City, N. Y.: Doubleday, Page & Co. 1918. Price \$1.00.

A totally different presentation than that by Sadler (just discussed) is made by Robert T. Morris in the volume entitled "The Way Out of War". Morris looks at the question from a biologic point, and in his little volume of 160 pages furnishes material to keep fifty debating societies busy for a year. Morris is very hard to read, because every sentence is pregnant with thought and opens up vistas which

tempt the steps of the reader. You can't read him, you've got to study him. His is not a book to take with you for a rest; and the worst of it is, that it is so profoundly interesting that, like the little boy with the jar of cookies, when you once start in on it, you can not keep away.

Thirty-one years ago, Morris and the present writer were quartered in the same room of the Riggs House in Washington, during the International Medical Congress. His personality was then charming, and we have often wondered into what it might have developed. The book under discussion answers the question to a certain extent; but, if some good wind blew Robert Morris in here some day, he would surely find a hearty welcome.

W. F. W.

JOSLIN: "DIABETIC MANUAL"

A Diabetic Manual for the Mutual Use of Doctor and Patient. By Elliott P. Joslin, M. D. Illustrated. Philadelphia and New York: Lea & Febiger. 1918. Price \$1.75.

This manual has been prepared by Doctor Joslin for the use of the many diabetic patients who are totally uninformed of the nature of their disease. Doctor Joslin probably has had a greater experience in the treatment of diabetes mellitus in recent years than any other physician, his textbook on the treatment of this difficult affection being one of the most useful treatises available at the present time. For this reason he is eminently fitted to present in brief manual form that information that should be imparted to the patients. The subject is presented in a strictly elementary manner. While undoubtedly of help to the general practitioner, it is even more useful as a textbook for his patients, whose intelligent co-operation it is intended to secure. Part I gives a rapid survey of the subject of diabetic disease. Part II contains an outline of the treatment of the severer diabetics, especially the technic of becoming sugar-free. Part III contains diet tables and recipes, which the author has found of value in his daily practice. In Part IV, are described the simplest tests which a physician can employ for the estimation of sugar and acid bodies in the urine, the sugar in the blood and the carbon dioxide

in the alveolar air. These tests can be readily carried out.

THORNTON: "FORMULARY"

A Pocket Formulary. By E. Quin Thornton, M. D. Eleventh Edition, Revised. Philadelphia: Lea & Febiger. 1918. Price \$2.00.

A pocket-formulary may be a prop for one's laziness or it may be utilized as a fruitful source of suggestions, for the purpose of refreshing one's memory, and of useful drug combinations to meet certain conditions. Thornton's formulary, which now is in its eleventh edition, has proved worthy of the favor in which it is held among physicians. It is full of valuable suggestions that are of actual service to the physician. In studying the various formulas given under the disease-names, the indications should not be neglected, because these frequently help to differentiate between a number of formulas and make it possible to apply the remedies with better success.

MEDICAL WAR MANUAL NO. 7

Military Surgery of the Zone of the Advance. By George de Tarnowsky, M. D. Illustrated. Philadelphia: Lea & Febiger. 1918. Price \$1.50.

In preparing this manual, Doctor de Tarnowsky's aim was, to give a résumé of the primary treatment that, in the light of painfully acquired experience on the western front during the past three years, is proving most satisfactory in the opinion of those best qualified to judge. The author points out convincingly that military surgery differs in a great many respects from civil surgery, notably in the fact that military necessity may compel the surgeon to devote his main attention to those with minor injuries, in order to return them to the front as soon as possible, while in severe lesions, such as those, for instance, of the abdomen, it may be possible only to cleanse and dress the wounds, sending the wounded as rapidly as possible to the evacuation-hospital.

While a famous French general recently said that the integrity of an army depends almost entirely upon its medical officers, the latter never may forget the basic idea,

that they first must be soldiers and then surgeons.

"A *sine qua non* of a good soldier is, to forget—to submerge in a large degree—his individuality as promptly and as thoroughly as possible. We all become cogs in a vast machine; each cog must work harmoniously to its utmost capacity toward a common goal—victory!"

Doctor de Tarnowsky's manual covers a great many subjects as the surgeon meets them at the front, and it is excellent in its way and a useful guide for meeting emergencies.

SOME BOOKS FOR NURSES

Essentials of Dietetics: A Textbook for Nurses. By Maude A. Perry, B. S. St. Louis: The C. V. Mosby Company. 1918.

Nursing in Diseases of Children. By Carl G. Leo-Wold, M. D. With 72 Illustrations. St. Louis: The C. V. Mosby Company. 1918. Price \$2.50.

A Textbook of physiology for Nurses. By William Gay Christian, M. D., and Charles C. Haskell, M. D. Illustrated. St. Louis: The C. V. Mosby Company. 1918. Price \$1.75.

Surgical and War Nursing. By A. H. Barkley, M. D. With 79 Illustrations. St. Louis: The C. V. Mosby Company. 1918. Price \$1.75.

Hygiene for Nurses. By Nolie Mumey, M. D. With 75 Illustrations. St. Louis: The C. V. Mosby Company. 1918. Price \$1.25.

In this little collection, the publishers are presenting some excellent guides for nurses in which the information is brought up to date. All these books are well written and the subject-material is clearly and lucidly presented.

LEWIS: "HEART BEAT"

Clinical Disorders of the Heart Beat. A Handbook for Practitioners and Students. By Thomas Lewis, M. D. Fourth Edition. New York: Paul B. Hoeber. 1918. Price \$2.25.

The Reviewer finds on his table two works dealing with the circulation, and one is the fourth edition of Thomas Lewis' "Clinical Disorders of the Heart Beat." This book illustrates in vivid manner the remarkable changes in the manner of treat-

ing heart affections, as necessitated by the progress made during the past few years.

The work presupposes on the part of the reader a complete knowledge of the older material, since only casual reference is made to it here. All efforts to harmonize the older clinical observations with the pathologic anatomy have been dropped, very little attention being given to either. Instead, in this new work, the treatment is based upon the data afforded by the sphygmograph—as may be seen by the following chapter headings: "The Identification of Disorders of the Heart Beat", "Sinus Irregularities", "Heart-Block", "Premature Contractions on Extrasystoles", "Simple Paroxysmal Tachycardia", "Auricular Flutter", "Auricular Fibrillation", "Alternation of the Heart."

The book is profusely illustrated with tracings and diagrams, and it is written in that easy, lucid style possible only to a master of the subject. Much of the confusion regarding the application of digitalis is cleared up; its priceless value being demonstrated and the conditions in which it is perilous pointed out, in which latter respect, it would be edifying to compare this book with Huchard's "When and How to Give Digitalis". Frankly, we find much to commend in this little book and little, if anything, to find fault with.

PRICE: "DISEASES OF THE HEART"

Diseases of the Heart. Their Diagnosis, Prognosis and Treatment by Modern Methods. With a Chapter on the Electro-Cardiograph. By Frederick W. Price. London: Oxford University Press. 1918. Price \$7.50.

F. W. Price's volume entitled "Diseases of the Heart" covers a much larger field than the preceding one. He first presents a chapter on the Anatomy and Physiology; then takes up the sphygmograph, and treats it with the importance it deserves. There is a chapter on x-Ray Examination; then follow others on topics similar to those of Lewis' book, until Chapter 18 is reached when the anatomic affections of the old classification are considered. Soldier's heart has a special chapter.

With the assistance of these two volumes, the clinician can bring his knowledge of the new work practically down to the minute; and, unless he has carefully kept up

with the new work being done in this line, he will be amazed to find how antiquated his previous knowledge has become. Price's work is completed by a double column index, covering thirty-six pages. It is a pleasure to the Reviewer to be able justly to approve so unsparingly of any work submitted to him.

FORD: "MILITARY MEDICAL ADMINISTRATION"

Details of Military Medical Administration. By Joseph H. Ford, M. D. Second revised edition. With 30 illustrations. Published with the approval of the Surgeon-General of the U. S. Army. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$5.00.

The second edition of this volume is published only four months after the first one had made its appearance—surely, an eloquent proof of its timeliness. Not only members of the Medical Service Corps will wish to study this volume carefully, but, for civilian physicians, likewise, it presents a wealth of useful information. That, aside from the interest naturally attaching to it, must prove of actual value. The fact, moreover, that this volume has received the unqualified approval of the Surgeon-General of the Army is a further factor in assuring its popularity.

COLLINS: "NEUROLOGICAL CLINICS"

Neurological Clinics: Exercises in the Diagnosis of Diseases of the Nervous System. Given at the Neurological Institute, New York, by the Staff of the First Division. Edited by Joseph Collins, M. D. New York: Paul B. Hoeber. 1918. Price \$3.00.

In this volume, Joseph Collins presents 41 papers contributed by the staff of the Neurological Institute of New York. These papers cover a large range, and, taking them collectively, they show considerable merit. Especially commendable we find the articles upon brain tumor, cerebral syphilis, and the affections of the spinal cord. There are three plates in black and white, all good enough to make us regret that there are not more. Volumes such as this one are of very great value to the practitioner, in that they aid materially in bridging the gap between the college textbook

and the practice of medicine as it comes to us.

MACKENZIE: "SYMPTOMS"

Symptoms and Their Interpretation. By James MacKenzie, M. D. Third Edition. New York: Paul B. Hoeber. 1918. Price \$3.75.

If, at any time, the novel you are reading proves dull and uninteresting, lay it aside and take up MacKenzie's book on "Symptoms and Their Interpretation." You are no true physician if you do not begin to sit up and take notice in less than two minutes. Further, you must be an extraordinarily good physician if you do not derive a whole lot of useful information from its perusal. We rather imagine that this is one of the books with which you would not willingly part.

However, there is one point that we must make against the author, and that is where he speaks of the difficulty of diagnosing hyperalgesia. There is not anything difficult whatever about that problem. Just dig out of limbo your old forgotten faradic battery and set it a'going. Applying the soothing pole indifferently, turn on a current strong enough to cause decided muscular contractions, then, by applying the irritant pole successively to each muscle or the affected region, you can easily make an absolute diagnosis. More than this, you will be enabled to ascertain the true cause of the affection. When one group of muscles or even a single muscle proves to be painful when put into contraction, you can then investigate as to what peculiar circumstance induced strain of this muscle, with its consequent degeneration. It may be that my lady has paralyzed her intercostal muscles by long-continued application of the corset, and then we say she has pleurodynia. Or, the man may bend over his desk until the planes of abdominal muscle rebel. If now you will reverse the current, reducing it so that it no longer occasions pain, you will, by this gentle faradic massage, aided by the inunction of cod-liver-oil, arrest the degeneration and, in fact, restore the nutrition of the organ.

All of which does not interfere very much with our commendation of MacKenzie's book as one of exceeding value to the practitioner and more interesting to read than a novel by Henry James.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6395.—“Uterine Malposition.” Referring to Question 6395, page 640, in August *CLINICAL MEDICINE*, it may not be out of place to say that many cases of uterine malposition, especially retroversions, result from the new mother lying in one position too long, especially flat on the back.

Every obstetrician should instruct his lying-in patients (unless there be special reason for not doing so) to change position quite often, at least after the first twenty-four hours after the accouchment, so that adhesions may not form. How-

ever, after she begins to get up and for at least one month thereafter, the mother each day should lie on her abdomen for a minute or two, in order that the heavy womb may fall forward, the intestines rise behind it, and then again assume any position that may be comfortable. It is in the period of subinvolution that the retroversions are caused; the heavy womb continues to rest on the rectum, the anterior ligaments remain long, and thus displacement will be caused; while, if the womb be inflamed, adhesions are liable to form.

St. Joseph, Mo.

R. WILLMAN.

Queries

QUERY 6398.—“Eczema Seborrhoeicum?” G. H. B., New Mexico, forwards a specimen of urine from a patient who has small blotches on his face, which are covered with a scaly, dandruff-like substance. After shaving, they are very red and, “after washing in the morning, these blotches, which are on the sides of the cheek and chin, come out with this white scale—immediately—similar to dandruff, and cover most of the face when the beard grows.” Under applications of cream, this disappears, but, the red blotches remain. After shaving, they become a deeper and shinier red.

Your patient probably is constipated or, at least, his daily evacuations are not sufficient. The first idea on hearing of this sort of facial blemish is, naturally, a suggestion of intestinal autointoxication, and this idea receives confirmation from the large amounts of indican and skatol that were found in the urine tested. For this

reason, we urge a thorough “cleanup” with laxative salines and a subsequent course of the combined sulphocarbolates. Later, galactenzyme tablets will be useful. At the start, however, we suggest the addition of a prescription for calcium sulphide, to be given to saturation, or, one granule (gr. 1-6) every hour for two or three days, and then, two or three granules three times a day. If for some time the general health is below par, by all means, add the combined arsenates. Locally, you might try a simple ointment of flowers of sulphur, rubbed up in a little lanolin, which should be rubbed well into the skin after shaving.

Instruct your patient to have his razor-blade very sharp. Blades that “pull” are liable to irritate and produce all sorts of skin trouble.

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QUERY 6399.—“Circumcision of Females?” M. E. B., Michigan, finds that none of the several works on surgery, dis-

cases of women, et cetera, accessible to him, describe the operation of circumcision of females, and he asks us to say in what textbook the procedure is described.

Among others, the operation is described in Van Schack's "Emergency Surgery" and also in Ashton's "Gynecology." As a matter of fact, the procedure is very simple, consisting merely in the excision of the redundant prepuce and the approximation of the raw edges by means of sutures. Ashton illustrates each step of the operation.

A general anesthetic should be employed. The prepuce is seized, on each side of the glans, with tissue-forceps and divided with a pair of straight scissors along the middle of the dorsum of the clitoris. Each flap, or half of the divided prepuce, is then removed with scissors and the raw surfaces covered over by uniting the edges with interrupted catgut sutures (preferably size 0 or 00).

Before deciding to perform circumcision, examine the patient thoroughly, to see whether it is not possible to break down any adhesions that may exist and possibly cause more or less serious local or reflex symptoms.

Place the patient in a dorsal position and apply a 10-percent solution of cocaine or anethaine, full strength, on a pledget of cotton, to the clitoris and upper portion of the nymphæ. After five minutes, grasp the clitoris between the thumb and index-finger of the left hand and pull the prepuce back as far as it will retract; at the same time, free the glans thoroughly by breaking up adhesions with a dry dissector or stout probe. Cleanse the parts thoroughly with a warm 1 : 2000 solution of mercuric chloride or of chlorazene, 1-percent. Then apply carbolyzed vaseline to the parts before allowing the prepuce to slide back over the glans. In order to prevent reformation of the adhesions, the latter procedure should be repeated every day until normal conditions have returned.

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QUERY 6400.—"Blood Pressure." G. M., South Dakota, asks: (1) "What instrument do you recommend to take the blood pressure?" (2) "What is considered normal blood pressure—systolic and diastolic?"

You probably will find the Tycos sphygmomanometer the most satisfactory instrument for ascertaining blood pressure.

There is little question that, in general practice, this, the diaphragm-type of instrument, proves superior to the mercurial type.

As you will understand, properly to determine minimal, or diastolic, pressure, the operation of the instrument must be absolutely coincident with the cardiac impulse. Such result can be obtained only with a well-made diaphragm-type of instrument, for the reason that there is no lost motion. To prove this, place the stethoscope over the brachial artery and listen to the sound in it. You will observe that the oscillation of the hand on the dial is absolutely coincident with the sound itself.

In the mercurial type of instrument, the oscillation, if it occurs at all, follows so slowly that the next impulse has appeared before the oscillations have ceased, so that the real value of the oscillation is interfered with by the returning impulse. Moreover, the mercury column, as cared for by the general practitioner, can not be kept clean, and foul mercury increases the capillary error. Further, the changes in capillarity, since they destroy the original value of the scale (owing to oxidation of the mercury) and the inability of the mercury column to indicate quickly the arterial impulse, should be carefully thought of when considering the general use of such an instrument.

As you readily will understand, it is difficult to state the "average normal blood pressure," as this increases with age. In a long series of examinations, the average blood pressure found was 127.5; that for females at all ages 122 mm. By grouping patients from 15 to 30 years, the average was 122 mm.; the average high being 141 mm.; the average low, 103 mm. Those from 30 to 40 gave an average blood pressure of 127 mm., an average high of 143 and an average low of 107 mm. Those from 40 to 50 gave an average of 130 mm.; an average high of 136 and a low of 113. Those from 50 to 60 gave an average of 132, an average high of 149, and an average low of 115 mm.

There is a gradual rise in blood pressure as the years advance, and it can readily be seen that a man between 50 and 60 years of age giving a blood pressure of 145 or even 150 might be accepted as normal, while the same pressure in a man under 30 would call for further study and investigation.

The average blood pressure in all cases in

which the pulse is under 65 beats should be about 125 mm., while the average blood pressure in cases showing a pulse over 85 should be 130 mm.

In making a large number of examinations, it will be found that there are quite as large a number of healthy individuals with a pulse over 85 as there are with a pulse under 65.

Dr. J. W. Fisher, medical director of the Northwestern Mutual Life Insurance Company, in his monograph, "The Diagnostic Value of the Use of the Sphygmomanometer in Examinations for Life Insurance," says: "We have a record of 420 accepted cases under the age of 40 with a blood-pressure average of 125.20 mm.; 26 applicants under the age of 40 were rejected, whose blood pressure was 150 mm. or over."

This writer would be inclined to regard 130 to 135 mm. as a normal blood pressure in the average person between 35 and 50 years of age.

We strongly suggest that you obtain Cowing's "Blood Pressure," a remarkably informative booklet, and, if you desire to make a more exhaustive study of the subject, read Janeway's "A Clinical Study of Blood Pressure" (Appleton & Co., New York), Wilson's "Medical Diagnosis" (J. B. Lippincott & Co., Philadelphia) or Mackenzie's "Diseases of the Heart" (Oxford University Press, New York).

QUERY 6401.—"Hirsutis." O. R. P. Iowa, asks for the best treatment for hirsutis. He has under his care a woman that is much troubled in this way and he does not want to experiment with her. He is afraid to use barium sulphide, saying that the hair will come out coarser after its use.

We regret to state that we know of no better local remedy for hirsuties than barium sulphide. A very good combination is, this: barium sulphide, 5 parts; slaked lime, 6 parts; wheat-flour, 10 parts. This has been used, with success, by hundreds of physicians in thousands of cases. However, as you will observe, the hair returns after application of barium sulphide, although, as a rule, in less vigorous form. In the majority of cases, there ultimately remains nothing but an inoffensive (or comparatively inoffensive) lanugo.

In cases of moderate acquired facial growth, full and permanent removal can

be effected only by means of electrolysis. Each hair, of course, must be treated individually, and it is practicable only where the hairs are coarse and not too numerous. In the hands of a good operator, few failures occur. Of course, the surface can always be gone over the second time and any missed hairs destroyed. From 35 to 50 hairs can be comfortably removed in an hour.

You will find that nearly all authorities consider barium sulphide (freshly made, if possible) the most satisfactory depilatory. Duehring recommends 2 to 4 drams of barium sulphide, with enough zinc oxide and starch to make an ounce. Personally, we have had better results with the combination of barium sulphide and quick lime.

In all cases, more or less redness follows the application, and it is desirable to allow the paste to remain on for a short time only, usually but a few minutes, so as to prevent undue irritation. Ordinarily, a feeling of warmth or slight burning is an indication that the paste has been on long enough.

Boettger's paste, as advocated by Kaposi, made by passing hydrogen sulphide into hydrated lime (made into a paste at the time of application by the addition of water), also may be recommended.

QUERY 6402.—"Nervous Breakdown"? R. K. M., Oregon, asks us to suggest supportive treatment for the patient whose case is described herewith: Female, age sixty-five, married, mother of several children. Weight, 130 pounds. "The woman suffers from nervous collapse; for four months she has been bedfast. She complains of a peculiar itching in the palm of each hand, also on the lower extremities, while dark-red spots are present under the cuticle in the palmar surface of the hands, also on the dorsal aspect of hands and wrists and feet. There is an elevation of temperature to 101 to 102 degrees each afternoon. Her urine, of 1010 specific gravity, straw-colored, slightly acid, and contains no albumin, no sugar, and no phosphates; but, some urates. The following treatment has been prescribed: Free elimination by the continuous use of calomel, podophyllin, and bilein (also phenolphthalein tablets, gr. 1 or gr. 2, as required), sodium phosphate, castor-oil, emetin, in 1/6 grain doses, several daily

doses of each to effect. It would seem that this treatment, in addition to daily warm-water enemas containing the combined phenol-sulphonate tablets (4 tablets in $\frac{1}{2}$ gallon), should favor free elimination of waste material. The patient has been on a light diet for several weeks, mostly cereals, while milk is excluded.

"The supportive treatment is: the arsenates of iron, quinine, and strychnine, with nuclein; also elixir of peptonate of iron and manganese, after meal-hours. Protonuclein, for a change, the past three days, in 12-grain doses, every three hours, always before meal-hours.

"There was severe suffering from muscle-pain early in the disease, but, the past week is not so severe. The petechiæ, possibly blebs or peculiar eruptions (whatever it is) do not become purulent, as there is no tendency to a break of the eruption on the surface. The patient seems to be improving in some ways, being not nearly so nervous, of clearer complexion, and with a better condition of the digestive system."

We are inclined to believe that you have to deal with a case of purpura, though it is possible, considering the absence of albumin in the urine and the gastric disorder, that it is erythema multiforme.

In purpura rheumatica, also in some other forms of the disease, there is always a slight elevation of temperature, and in purpura senilis such elevation may occur and the purpuric spots appear on the lower extremities (usually about the ankles) and on the hands and forearms.

Your general line of treatment could hardly be improved upon, but, we should add macrotin and a combination laxative containing sulphur, strychnine, podophyllin, and berberine hydrochloride.

We should be inclined to omit the emetin, temporarily, at least, but, would continue the enemas, substituting physiologic salt solution for the sulphocarbo-lates. Instead of castor-oil, give reasonable doses of liquid paraffin each night. Calomel and podophyllin might be given, with advantage, say, once a week. Later, the patient well might receive *Bulgaric-bacillus* culture, either in the form of tablets, two or three, three times daily, or, better still, in liquid form, night and morning. We should give this patient all the

vegetables (especially carrots and spinach) and ripe fruits she can take care of. It hardly is desirable to limit her to a starchy diet.

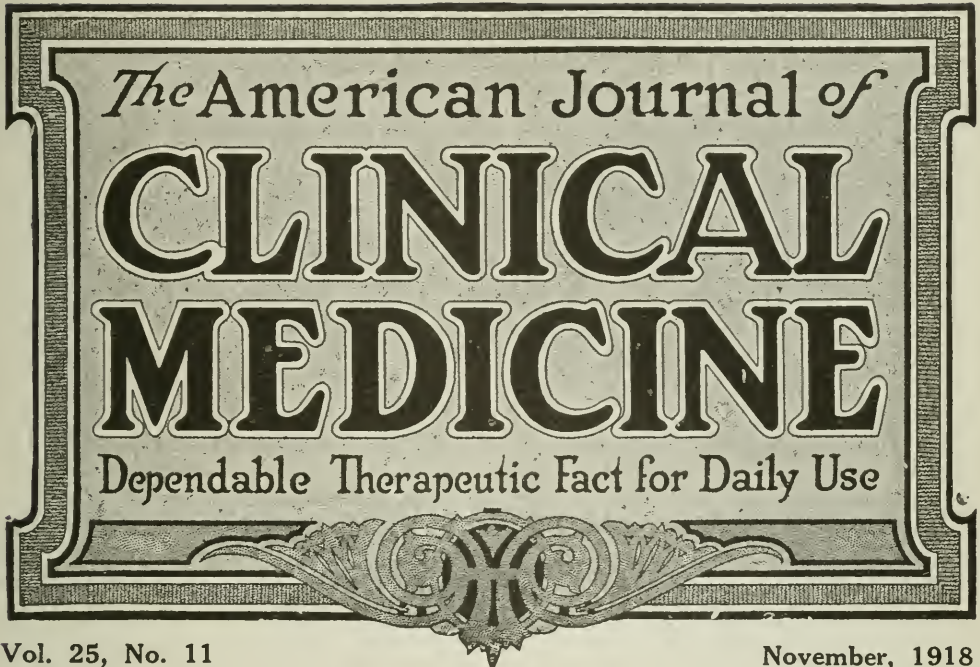
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QUERY 6403.—"Formication". T. H. G., Mississippi, has a patient who complains of a sensation like that of ants crawling on his skin. There is no flushing, no swelling, no redness, not a symptom indicating any congestion or inflammation, no periodicity. Sometimes a little lump will form under the skin. There never is any fever. The patient is continuously picking at his eyes, saying there are bugs in them. He thinks he is bewitched.

We regret to state that it is impossible, without a clearer idea of basal pathological conditions, to venture an opinion as to the cause of the formication complained of by this patient. In the first place, you do not give us any idea of the individual's age, nor do you state whether there is any evidence of autotoxemia. It is probable that the symptoms you describe have their origin in autotoxemia of intestinal origin.

It would be well to send a specimen of urine (4 ounces taken from the mixed 24-hour output, stating the total quantity voided) to a competent pathologist, for examination. At the same time, ascertain the pulse rate, blood pressure, presence or absence of hepatic congestion, or if there is any spinal tenderness. What is the condition of his mentality generally?

Suppose you try 1 grain of blue mass and soda half-hourly, four to six doses at night, and a full dose of magnesium sulphate the next morning; repeating this medication every third night for two weeks. At the same time, order, every other night on retiring, an epsom-salt sponge-bath (1 ounce to the quart of water). Three times daily, after meals, give arsenous sulphide, 1-64 grain, and some such combination as strychnine, quassin, papain, and juglandin before eating. At the same time, inform the patient that after the end of the first week the symptoms will have almost entirely disappeared and will be gone absolutely in another five or six days. The eyes well might be bathed with a solution of boric acid.



Spanish Influenza

ON the subject of the present epidemic of so-called Spanish influenza, which appears to have assumed a pandemic extension, the United States Public Health Service has published various communications in *Public Health Reports*, a popular account also appearing, as Supplement No. 34, to the same publication for September 28, written for general information.

It has been denied that this disease is actually caused by the influenza-bacillus, while micrococci catarhalis, pneumococci, streptococci (e. g., viridans), and various staphylococci have been isolated. Irrespective of whether the influenza-bacillus actually is concerned in the causation of the affection or not, it undoubtedly is true that some of the other organisms involved are responsible for the severe symptoms that are observed. As in any influenza epidemic, it will be wise to treat every "cold" as though it were influenza and to take every possible precaution, in order to prevent complications that constitute the most seriously menacing factor.

Spanish influenza, three-day fever, the "flu" are terms applied indiscriminately to

this affection. It is characteristic, we presume, of our national nonchalant attitude toward danger to have evolved and put to use at once some flippant designation, such as "flu", for a disease that certainly can not be treated with levity. However, we believe that the public has been fully impressed with the seriousness of the problem confronting us and that physicians are not finding much difficulty in enforcing the greatest care, not alone on the part of those affected, but also of the public at large. It seems to be realized that this is no time when we can yield supinecy to any "visitation" whatsoever, but must unite on energetic measures to overcome it promptly and thoroughly, so as to be free and untrammelled for the highly important and pressing work of carrying the war to a successful termination.

Clinically, the symptoms are those of a severe grip, the outstanding features being: headache, depression, general malaise, aching all over, and, very soon, high fever; a temperature of 103° and 104° F. is not exceptional. In a few cases, we have observed an initial digestive distress, some-

times even nausea. We can not agree, however, with the assertion of some writers, that constipation is the rule; indeed, in several cases diarrhea was present. Cough, which is likely to be very tight, occurs on the second or third day. The pulse may attain a frequency of 120 and even 140; while occasionally it is observed to be very slow, as few heartbeats as 60 per minute having been noted. The patient is severely prostrated and gives the impression of being very ill.

In ordinary cases, the affection runs its course in a few days. Whether the active treatment instituted contributes to this result or whether the disease is self-limited, it is not possible to say. In various instances where a high temperature was reduced to 100, by means of sponging and tub-baths, it rose again in the course of a few hours, and this behavior persisted for several days, until eventually the infection seemed to have been overcome by the development of an efficient immunity.

As has been noted by many observers, the danger of "Spanish influenza" lies not so much in the primary disease as in the complications, the most notable of which is pneumonia, and this seemingly of the lobar type and almost invariably rapidly fatal. In one case, in which the present writer was called in consultation and where he sought to relieve the pulmonary congestion by venesection, the blood coagulated as soon as withdrawn, indeed, clogged up the large-caliber needle that tapped the vein. This fact of the blood being intensely coagulable in the pneumonia of Spanish influenza indicates a rapid development of pulmonary edema and affords certain therapeutic suggestions.

One important feature in influenza is, the leukopenia which has been observed by almost all laboratory-men studying the disease. In contrast with many other infections, there seems to be no leukocytic response by the appearance of a hyperleukocytosis, and here, again a therapeutic indication is presented.

As to the treatment, we have found acetylsalicylic acid to control the fever measurably well in cases of not great severity. It certainly diminishes that aching all over the body of which the patients complain, and it very probably also exerts a slight germicidal effect. We have found it well to guard the heart, while giving

acetylsalicylic acid, by 1-grain doses of monobromated camphor or by cactus grandiflorus. Our best results in controlling the fever were secured by sponging, packs or tub-baths (in children), either in water or with epsom-salt solution (1 tablespoonful to the quart). In children, the tub-bath may be given, starting it warm and then cooling off until the temperature is reduced to about 100° F. For adult patients, sponging is more feasible, although a pack has given very satisfactory results; a bath-towel being wrung out of the epsom-salt solution and wrapped around the trunk and allowed to remain for several hours.

In order to ease the cough and loosen bronchial secretions, iodine—for instance, in the form of iodized calcium—is a very acceptable remedy. It may be given freely and to effect. A systemic antiseptic that has proved of value, both prophylactic and curative, is calcium sulphide. This should be given continuously, to saturation, the latter to be maintained for several days.

In order to increase the systemic defense and overcome the deficiency of white blood-cells, hypodermic injections of nuclein have, we believe, given good service. In the early stage, before there is any fever, one or more doses of a bacterin containing the micrococcus catarrhalis, the bacillus of Friedlander, several pneumococci, streptococci, and staphylococci seem to induce an effective immunity, and we believe that such a bacterin is advisable as a prophylactic.

Great care must be exercised in the general management of the cases. The patient should be put to bed as soon as marked illness has declared itself and be kept there until all symptoms have been absent for several days. This is indispensable, if complications are to be guarded against. In our experience, there is no contingency in which the physician must more insist with the utmost stringency upon strict obedience to his orders than in the present epidemic of "Spanish influenza," by treating the patients promptly and energetically in accordance with the severity that the attack may attain, even before this has actually declared itself. We believe that many serious complications and many deaths may be prevented by observing these precautions.

It must be borne in mind that complications involving the lungs occur especially in strong, vigorous, young subjects. The

present writer has in mind the case of a young woman previously in splendid health and of magnificent physical development whom he saw in consultation and in whom there developed pneumonia very early in the attack and to which she eventually succumbed. It seems to us that great physical vigor enables the organism to exert a rapid and marked germicidal bacteriolytic action upon the invading organism, although it does not succeed in breaking down the resulting toxins with sufficient rapidity. The result is, that the circulation becomes so swamped with toxins that it succumbs to its own immunity, so to speak, the respiratory and circulatory centers being paralyzed and death supervening rapidly.

We can not insist too strongly that physicians should be particularly severe with those healthy young patients who laugh at the idea of danger possibly lurking in a "cold," even though this might be severe. Their very bodily strength, of which they pride themselves, is a source of danger. This has been terribly typified in the many fatalities that have occurred at the Great Lakes and in several military camps.

The dietary and hygienic treatment is to be regulated in accordance with the usual rules. Convalescence is assisted by an appropriate tonic, such as, for instance, the arsenates of strychnine, quinine, and iron, or some preparation of creosote.

Under no circumstance, must the patients be permitted to return to work too early, not only for their own sake, but, also, in order to protect those with whom they may come in contact. This precaution was brought home to us particularly on finding Vincent's spirillum in the sputum of one convalescent. This enforces the lesson that we must examine the sputum of every convalescent before dismissing him from treatment.

The man who has everything enjoys nothing, and the man who has nothing enjoys what he has.

THE PREVENTION OF SPANISH INFLUENZA

In the course of a great pandemic like the present one of Spanish influenza, which is sweeping from coast to coast and from the Great Lakes to the gulf of Mexico, the question that is asked of the doctor more than any other is, "What can I do to protect myself?" Not only is the individual

himself concerned in the correct answer to this question, but, virtually every social and industrial organization; for, in a community where this disease is epidemic, everything stops unless it is arrested and eradicated. Equally important with the sickness and the deaths that cause such widespread anxiety, is the slowing down of production at a time when all America is concentrating upon work necessary for the winning of the war.

What answer can the doctor give to these requests for protection? Is there anything of practical value that he can offer? Our answer is, "Much."

It is known that Spanish influenza, like most contagious diseases, is conveyed by the secretions from the nose and throat. This much seems to be definitely proven. The problem, therefore, is a twofold one: (1) to remove, so far as possible, contact with persons that are discharging these germ-laden secretions from the nose and throat; (2) to prevent the multiplication of these organisms in the nasal and oral cavities.

The first of these measures can be but partly accomplished, by means of quarantine and segregation, because of the large number of persons contracting the disease at the same time, and because of the large percentage of those that have the disease in such a mild form as to go either unrecognized or untreated. However, segregation should be enforced to the fullest extent possible, and indiscriminate mingling of people in crowds and in public assemblages of any kind should be reduced as much as possible without disturbing the public morale. When people are actually sick with the disease, and particularly if they are severely ill, it is desirable that the mouth and nose of the patient and attendants should be covered with a gauze face mask. Such a mask can be easily extemporized by any ingenious housewife. Two or three layers of gauze are sufficient, and, to make assurance doubly sure that no dangerous organisms penetrate the mask, it is an excellent plan to impregnate it with some simple but powerful antiseptic, for instance, an oil solution of dichloramine-T.

For personal prophylaxis, the nasal and oral mucosa should be kept as nearly sterile as possible. For this purpose, the various Dakin antiseptics are probably the most efficient. Dichloramine-T, for instance, is

probably the most powerful germicide ever introduced, and it has the added advantage of being virtually nontoxic. Dakin and Dunham, in their "Handbook of Antiseptics," have shown that a 5-percent solution of dichloramine-T will destroy the ordinary organisms, in a blood-serum and muscle-extract medium, in thirty seconds, something not accomplished with strong solutions of carbolic acid and bichloride of mercury in several hours. A comparatively weak solution of this antiseptic will, we believe, render the nasopharyngeal mucosa an unfavorable medium for the development of the microorganisms involved. The oily-solution has the added advantage of adhering to the mucous membrane for several hours, surrendering the germicide slowly, and thus giving prolonged protection. The only objection to the use of this antiseptic is that, to give best results, it should be applied either by a physician or a trained attendant.

A simpler antiseptic, and one that is also exceedingly powerful—far more so than carbolic acid or bichloride of mercury—is chlorazene, which can be used as a gargle or spray for the nose or throat. This is the most satisfactory antiseptic for home use. It is one that can be employed by any person of average intelligence.

The ideal toilet for the nasopharyngeal tract would seem to consist in the combined use of these two antiseptics; that is, chlorazene for home use, dichloramine-T for use in the factory, hospital or other institution where trained attendants can administer it. This is the combination which is being adopted by a number of the great corporations; for instance, the Inland Steel Company, in one plant employing 7,500 men, is providing dichloramine-T-chlorcosane spraying for its entire force twice a day. Each working man is supplied with a dozen tablets of chlorazene, contained in an envelope stamped with simple directions. This concern, as do other corporations, realizes the vital importance of home treatment. Sickness at home keeps the workman at home, and, more than that, from one family the disease is likely to be spread to others. The welfare of the institution is bound up with that of the community.

Many have asked us as to the practical use of vaccines or serums. First, we may say that no prophylactic serum has thus far been devised. It is possible that in the

treatment of the complicating pneumonias, the type 1 pneumococcus-serum may prove of considerable value, in treating the disease, but, it is probably of no value as a preventive of influenza.

A good many physicians are claiming excellent results in the prevention of the disease by the use of bacterins. It is probable that these, properly used, do exercise a very beneficent effect and may, possibly, entirely prevent the occurrence of the disease in some instances.

It is difficult to immunize against the influenza-organism, and it is, therefore, a question whether its inclusion in a prophylactic bacterin adds to its value. There is no doubt that streptococci (particularly the hemolytic) feature very strongly in the etiology of this epidemic, and particularly in the occurrence of complications. The micrococcus catarrhalis has, likewise, been found present by almost every observer. While most of the influenzal pneumonias are streptococcal, pneumococci are being found in some instances. A combination of these organisms in a bacterin should, therefore, have considerable value in fortifying the organisms against infection with these germs.

What of internal treatment? No one can offer a panacea. However, we have great faith in our old friend, calcium sulphide. We believe that thorough saturation with this malodorous but exceedingly valuable drug will contribute very greatly to the prevention of the disease. For this reason, we have no hesitancy in recommending its use in every instance.

On account of the existing deficiency in leukocytes, it is reasonable to induce a hyperleukocytosis by hypodermic injections of nuclein solution.

Now, to epitomize:

To prevent influenza, we suggest the following routine:

1. So far as possible, segregate every person sick with the disease. Keep him at home and away from contact with other people. Discourage other people coming to see him, except the absolutely necessary attendants. In the home, put him in a room by himself. Cover the door with a sheet saturated with an antiseptic solution and keep other members of the family out.

2. In the course of an epidemic, advise the use of chlorazene solution; one of 1-8 to 1-4 of 1 percent as a gargle, and a weaker

solution as a spray or instillation in the nose. In every manufacturing plant, hospital, and Army cantonment, and in other places where mass treatment is desirable, spray twice daily with a 1-percent dichloramine-T-chlorcosane solution.

3. Use as a prophylactic a vaccine containing streptococci (viridans and hæmolyticus), pneumococci, and micrococcus catarrhalis. Give a relatively small dose at the first injection, and repeat once or twice.

4. Saturate thoroughly with calcium sulphide all those willing to take energetic measures for prevention.

The reason most people are willing in the end to admit their life a failure is, because their ideals were too lofty in the beginning. If we could only start out with the understanding that man is a two-legged beast, we would save a lot of time and have a heap more fun.—H. L. Meader.

PUTTING WAR OUT OF BUSINESS UNIVERSAL MILITARY SERVICE

A few weeks ago, a great exhibit was held by the United States government at Grant Park, Chicago, in which various war activities were illustrated forcibly to us stay-at-home civilians, even to the carrying out of sham battles and trench warfare. Even more than the racket of muskets and the booming of cannons, more than the whirling of aeroplanes and the maneuvers of the troops, the visitors to this exposition were impressed with the pictorial descriptions of the distress of war in devastated Belgium and France and by the evidences of the hardships which our boys and those of the Allied nations have to undergo in order to repel the invasion of the war-crazed enemy. The pictures that were shown, oil paintings, drawings, news-prints, depicting the most horrible conditions in the destruction of towns, villages and peoples in the wanton slaughter of animals and especially in the unspeakably cruel and criminal murdering of helpless women and children, must have more than anything else aroused the wrath of the beholders and the burning desire to do away with any government whose machinations and intrigues could bring about such frightful conditions.

We are pledged with the Allied nations to bring the war to a successful termination and we are unanimous in that we mean by successful a victory that shall make it impossible for the German government ever again to endanger the peace

of the world. The opening months of the war have emphasized the handicap that necessarily must hinder peoples who are engaged in peaceful pursuits and do not in any way devote personal and individual attention to war-like preparations in the way of military training, when suddenly forced to take up arms. We might point, however, to Switzerland which succeeded promptly and without any hitch in mobilizing its army, by no means contemptible in size and quality, and is occupying its borders, surrounded as this country is, by warring nations. The efficiency with which Switzerland has maintained its military preparedness is due to the fact that for many years every able-bodied citizen of this democratic republic has been a soldier; that he knows how to bear and use arms, and how to defend his country.

In our own country, the absolute ignorance of the vast majority of people in military matters was made especially evident when our government was confronted with the task of raising and training a huge army for which only the smallest nucleus existed in the shape of the regular army and of the national guards. In calling upon the young men between twenty-one and thirty-one years of age who reported for military service, an astonishingly large proportion of men was found to be physically deficient for the task that was to be accomplished. This state of affairs presented a serious problem not only to the military advisors and authorities of the United States but also to sanitarians, educators and many others who by virtue of their calling are concerned and interested in the physical development of the people.

In the training camps in which the accepted young men were subjected to the rigorous course of military training, the advantages of the strenuous military life soon become evident and the conviction has become more and more general that military training is of service and possesses possibilities for great good, physically and mentally, not only in the existing emergency but also for later times; even though we all hope that never again shall the world be called upon to defend its homes in the manner in which it has been necessary for over four years. Military training and discipline have impressed upon young Americans a lesson that will bear fruit for many years to come. This is shown in

an improved physical condition, in a smarter, more decided bearing, in the absence of slouching, but also in a greater decision of action; the consequences of clean, healthful, regular living being manifested in many directions.

An instance of this which is particularly expressive was illustrated in *The Military Surgeon* for April, 1917, where pictures of two North Carolinians "before and after" military service were published. On enlistment, the two boys showed the sloppy, slouchy, unwholesome attitude that travelers in North Carolina are so familiar with in the mountaineers. Thin, anemic, shiftless, lazy—we know the type, having seen them meandering after their wives, with their hands in their pockets, while the latter carry the baby and a basket of berries or flowers that they brought to the town to sell in order to support the husbands. Too "delicate" to work, the men live and amuse themselves, yet, they are strong enough to go shooting, tramping through the woods for days. However, what we are coming to, the second picture of the same men shows them as soldiers in Uncle Sam's uniform, well set up, intelligent, alert. If they are at present in France, as we presume is the case, they undoubtedly have helped vigorously in the victorious onward march of the Allied and American armies which put the German soldiers on the run. Moreover, we venture to predict that, after their return, they will no longer be content with their former shiftless ways of living but that they will be active and useful citizens.

This is what military training has done in extreme cases. It would do that, and more, for the young manhood of cities and villages and would develop a sturdy, vigorous, aggressive (in the good sense of the term) energy which needs must result in bringing American activities and enterprises even more to the front than they already are. We have repeatedly voiced our opinion in favor of universal military training as a permanent institution of the United States. The experiences of the war have supported our convictions.

THE COOTIE

The importance of little things for the success or failure of great undertakings is manifested particularly in the problem presented by body lice and similar para-

sitic pests that infest persons who live for long periods in places where bathing and disinfecting facilities are not available. One of the serious tasks that have to be solved by the sanitarians in charge of soldiers' camps, more especially in the advanced lines and in the trenches, is that of the "cooties" which not only impair the military efficiency of soldiers and officers alike by the everlasting nagging torment to which they subject their victims but are even far more dangerous owing to the fact that they have been proved guilty of transmitting serious diseases, such as trench fever and various infectious maladies.

In the nature of things, the extermination of body parasites is most difficult in the trenches and it was of paramount importance to investigate closely the life history of these insects as well as their habits and the manner in which they are capable of transmitting disease.

There is in Washington a man hailing from Chicago who is acting in personal and intimate cooperation with entomologists of the United States Department of Agriculture in their endeavor under the direction of the Council of Research of the Council of National Defense to find preventatives and exterminators for the body parasites. Valuable data in regard to the control of the "cootie" have been obtained from the parasites that this volunteer permits to live on his body and moving pictures of them have been taken through the microscope which are to be magnified and shown at army camps before scientists and army officers engaged in delousing work.

The entomologists, in addition to watching these particular "cooties" and others confined in glass tubes and other places, are testing chemicals to learn their destructive action on lice, their effect on human bodies and their penetration of clothing. Also, they are cooperating with army officers in testing laundering and delousing processes. They are trying to add to the knowledge of how to repel, kill or drive away the tiny parasites that to many of our soldiers have proved more troublesome than the Huns or the bullets of the Huns.

One of the scientists of the Bureau of Entomology, Department of Agriculture, also is serving as a host for the parasites, but in a more restricted sense than the Chicago man. His "cooties" are confined under the glass top of a wristlet, much like

a wrist watch, and they pass their existence, from the egg stage to the dead adult, on the skin of his arm, and can not move to any other spot. Through the glass cover the entomologist can watch the "cooties" as they emerge from their shells and go through all the stages of their life cycle.

Extensive Governmental efforts to devise ways of overcoming the parasitic evil are under way. Similar efforts have been made and are being made in practically every country that has large armies in the field.

CLINICAL OBSERVATION AND LABORATORY RESEARCH

The trend of modern medical thought is toward chemical and biochemical investigation, and the value of clinical data naturally is discounted unless the latter can bear the searching scrutiny of the cold eye of the laboratory. This is as it should be. However, it does not follow that clinical conclusion should be discredited or discarded while awaiting laboratory proof. Moreover, when with almost unflinching regularity certain definite results follow upon certain definite procedures, one may be forced to conclude that dependence of the former upon the latter is real, and not chimerical.

This opinion, expressed in an article in a recent issue of *The New York Medical Journal*, only repeats a conviction which we have voiced more than once in the past. It has so often been pointed out that the "cold eye of the laboratory" arrogates to itself too great a power of decision and that it leaves out of consideration the unquestionable value of clinical observation and experience. If the laboratory worker desires to subject everything to chemical or biochemical tests, and if he is prone to go too far by crediting the value of these tests with almost mathematical certainty, the clinician in part is to blame himself, because he has, in the past looked up to the laboratory-worker and deferred to his opinion more than was justified by facts.

It is within the memory of many of us that medical research was carried on almost entirely by clinical observation at the bedside. Animal-experimentation for the purpose of elucidating purely medical problems were first undertaken only at about the middle of the past century, although Albrecht Haller (+1777) already

utilized animals in experiments in physiology. Through all the centuries preceding the last one, the total of medical knowledge had been gained by observation, and it is a cause of constant surprise and admiration that this observation has been so correct and that deductions had been justified so fully as actually was the case. One need but recall in proof of this certain descriptions of Hippocrates which hardly can be surpassed by the most modern treatises in clinical acumen and common-sense reasoning.

It is true that laboratory-research, chemical investigation, and experimental medicine, supplemented by pathological physiology, had aided us in elucidating many problems that had been obscure. Yet, however much the results of these more recent researches contributed to secure more favorable results in the treatment of patients, they have extended more to details than to principles.

All these things are true even more now than they were in times past. We desire to warn against neglecting the study of the patient as a clinical entity in favor of purely laboratory-research. It must never be forgotten that even in experimental medicine the methods of investigation never can be absolutely positive and that there always is the unknown factor, even in animals, of individual peculiarity. This factor exists in even greater degree in human beings, where the mental processes play so important a role in coloring the subjective symptoms and where the individual equation is a large factor in regulating the yielding of the organism to disease.

This might be carried further. However, there is another point that can be made in support of clinical observation. While in the last twenty years or so pharmacology has done much to establish the value of certain drugs and therapeutic procedures, it can not be maintained with justice that all the prior observations and studies given the action of drugs upon the diseased human organism were useless or that their conclusions have to be discarded. Indeed, ultimately, pharmacological experiment has to conform to clinical conclusions based upon experiences at the bedside, and these never can be replaced entirely by pharmacological experiments.

The practical outcome of all this is, that, besides the advantages to be gained by re-

course to laboratory-studies, the practitioner and the clinician would make a mistake if they were to deny themselves the information derivable from actual clinical experience. After all, the test of any therapeutic procedure, no matter how well substantiated in the laboratory, is afforded only by the clinical proof under conditions of disease in humans. It remains a fact that laboratory-research can be only in the nature of a guide and that it is of no use unless it is susceptible in practical proof in actual pathologic conditions.

An electric fan will buzz away all day and blow off a lot of wind, but, it never says anything.

"SPANISH" INFLUENZA (GRIP)

The New York City Board of Health recently published the following information, in form of a circular, which may well be accepted as a model for other health authorities.

Influenza and pneumonia, are infectious diseases caused by germs which are carried in matter that was spat, sneezed, or coughed up by sick persons or by persons who show no signs of illness.

If a person is not in good health he usually is unable to resist the attack of the germs.

If everybody followed this advice strictly, there would be little danger of an epidemic.

Special Advice for Preventing These Diseases.—Avoid contact with matter which is sneezed, coughed up, or expectorated. If you must sneeze, cough, or expectorate, do it into your handkerchief.

Do not use a cup, spoon, knife, fork or dishes which have been used by others unless they are first thoroughly washed in boiling water. This applies to the home as well as the restaurant and soda water fountain.

One should avoid placing into the mouth, pipes, cigar holders or pencils which have been used by others.

Avoid placing the lips against the mouth-piece of a telephone.

Do not use a towel, napkin, table or bed linen which have been used by another person, unless they have been boiled or otherwise disinfected.

The home, the office, the workroom, the street car, and all assembly places, should be kept well ventilated. The young, the

elderly and those who are weak, should be particularly protected from being chilled or wet.

So far as practicable avoid crowds in subway cars, at mass meetings, theatres, moving-picture shows or other gatherings, even at the expense of a little loss of time or convenience.

One should avoid over-eating, especially if after doing so, one may be exposed to cold, chill or rain. Proper selection of food and exercise in the open air, particularly walking, are helpful in increasing one's power of resistance to disease.

Dry sweeping on the platforms of subway and elevated stations, in factories, stores, as well as other public places, and the shaking of rugs in public places, are dangerous.

So far as possible avoid becoming fatigued.

One's hands should be washed before eating. Patronize only such restaurants as are clean.

Care of the Sick.—Those who feel ill and whose symptoms suggest an attack of influenza, pneumonia, or other infectious disease, should promptly go to bed. This precaution alone will frequently shorten the attack and prevent dangerous complications.

Stay in bed at least two days after the fever, in influenza, has subsided.

A person suffering from these diseases should have a separate room and should sleep alone.

A sick person should cough, sneeze, or spit into a handkerchief; or better still, into a small piece of gauze or cheese-cloth. Such gauze or cheese-cloth should be burned. Handkerchiefs, pillow cases, bed sheets, bed covers, and gowns should be disinfected by boiling. If for any reason boiling is not practicable, such linen which may contain the infectious discharges from the nose, mouth, throat and lungs should be disinfected by soaking in a 5 percent carbolic solution for at least 2 hours.

All visitors should be kept out of the room occupied by the sick person.

All dishes, glasses and other utensils used by a sick person should be used exclusively by that person, and should not be used by any other individual until they are washed in boiling water.

In all cases, a physician should be called in and no patent medicines or advertised

remedies should be employed. One never knows at the beginning which case will turn out to be a mild one and which a very serious one.

Protection of Children.—The above precautions apply both to adults and children, but the department wishes to emphasize precautions for the protection of children.

Each child should receive daily an individual handkerchief or clean piece of muslin. No child should be permitted to handle a handkerchief or muslin cloth which belongs to another person.

Pencils, toys, and other objects should not be placed into mouth. Fingers should be kept out of the mouth.

Avoid wetting of feet, or chilling of body especially when perspiring.

Children should sleep alone when possible; they should not be crowded in the homes or elsewhere.

They should be kept away from children's parties, moving-picture shows and similar assemblies.

Children should not be overclothed, particularly when indoors.

Cleanliness, fresh air in the living room, good and sufficient food, clean teeth and mouth, and plenty of sleep keep the body strong.

No child with fever, running eyes or nose, sore throat or cough, or otherwise ill should be allowed to go to school.

Members of the family who are ill, should as far as possible remain in a separate room and away from children, and have their own towels, toilet articles and eating utensils.

It is especially urged that so far as possible children should not be kissed when influenza or colds are prevalent.

BOARD OF HEALTH,
ROYAL S. COPELAND, *President.*

A man might as well talk of going on his honeymoon alone as hope to accomplish any good by worrying.

ACTIVE PRINCIPLES VERSUS GALENICALS

"The advantage of prescribing that active principle, for which a galenical is selected, rests upon the fact that the numerous associated principles composing the crude drug are eliminated and many objectionable results thereby avoided."

This sentence, or words to the same effect, might have been written, more than

twenty years ago, in the old ALKALOIDAL CLINIC, say by Doctor Waugh, who, indeed delivered himself time and time again of the same sentiment. As a matter of fact, however, the above sentence was penned by a prominent physician in the "City of Brotherly Love" who has made the discovery that tinctures, fluidextracts, and other galenicals are not reliable in potency and value; that the crude drugs from which they are prepared often are far from uniform and pure, and that in any case it would be much more satisfactory, both to the physician and to the patient, to employ active principles, the action of which is definite and uniform, and to do away with the unscientific and clumsy old-time prescribing of galenicals.

This preachment by Dr. Henry Beates Jr., as found in *The Medical Record* for August 31, makes this impression, that active-principle therapeutics is being recognized more and more freely by men prominent in their profession; and, really, Doctor Beates' argument is a splendid arraignment of the unreliable galenics, as, also, a masterly vindication of the use of active principles. Until recently, however, the great leaders of medical thought had committed themselves to the condemnation of the little seed sown in Ravenswood more than a quarter of a century ago. They insisted on prescribing galenicals and on rejecting the "alkaloids" as frauds and worse. *Ergo*, these alkaloids and worse did not exist in "decent" practice; and, again *ergo*, they are just being discovered for actual practical use, although they have been known to exist, of course, as scientific curiosities.

However, let's not cavil at the manner in which this "new" gospel is being preached. The important point is, that it is sealed and delivered and passed on to medical publicity, so that the general practitioner may feel perfectly ethical and all right in his long continued use of these same old friends of his that he has employed, lo these many years. They have received, at last, the justification and benison of authority.

Doctor Beates compels his readers to recognize the fact that too commonly galenicals are prescribed, properly named, but, of unknown potency or value; also, that failure to obtain logically anticipated results is almost the rule, notwithstanding

administration of these galenicals in the usual, conventionally adopted doses. In explanation of this fact, he relates certain personal experiments and observations, undertaken years ago, and according to which tinctures of aconite, nux vomica, digitalis, strophanthus, obtained from different druggists, varied so constantly in their potency that many times the "conventionally adopted" dose was necessary to secure the physiological effect. Moreover, on permitting these same galenicals to stand on the shelves for a year's time, it was found that they had lost from 20 to 60 percent of their original therapeutic potency. Further, the unreliability of galenicals is brought home to the reader, by being told that the crude drugs not only vary materially in their active-principle content, but that, too often, cheap and inferior crude material is utilized for the preparation of tinctures and other galenicals. For illustration, Doctor Beates himself purchased belladonna leaves at prices varying from 40 cents to 2 dollars per pound. Needless to insist that the 40-cent variety did not produce a tincture of very prominent atropine content. Finally, even the latest revision of the U. S. Pharmacopeia fails to lay down definite and scientific rules for the preparation of galenicals; as a result of which, these preparations cannot but be inexact in composition and drug-strength. Consequently:

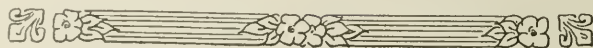
"As galenicals are today, it is imperative that the clinician, in order to obtain positive and unquestioned results, *test the particular medicament he is administering* (italics in original) and thus learn and know what definite effects a given dose, other things being equal, will certainly accomplish."

But, may we ask, why go to such lengths of cumbersome and time-robbing tests for the safeguarding of the notoriously unreliable galenicals, when it has been admitted by the author himself that it is far better to prescribe the active principles in their

stead? The objection that these active principles are, now, prescribed in impotent quantities hardly holds good, since the dosage of alkaloidal tablets and granules has been determined, not for massive effect, but in order that the full drug action, for each individual patient, may be secured, without risk or danger, by the repetition of small doses up to the desired point. Doctor Beates, however, is quite right in expressing his astonishment that at this present day the medical profession remains content to rely upon an armamentarium that has been handed down from generation to generation, with apparently no, or at best very feeble efforts at betterment.

To use Doctor Beates' words, the time has arrived for the effort to be exerted for establishing scientific methods for the manufacture of medicine that will possess a uniform and standard degree of physiological potency. But, may we add it? this goal has been reached years ago; these definite drugs of standard and known potency have been prescribed and dispensed by many, very many general practitioners; and, their patients have reaped the benefits of such scientific prescribing, while the great medical thinkers of our country have remained content to prescribe useless galenicals and (therefore?) to decry to use of medicines itself as unavailing. Please remember, that therapeutic nihilists are not among the general practitioners, who are mostly enthusiastic and capable therapeutists, but, among the teachers and great clinicians; those who refuse to admit recognition to new things, unless they are proposed with their own approval. At last the medical world is waking up to the possibility of prescribing intelligently and, therefore, successfully. There is yet hope for sick people.

We owe a great debt of gratitude to Doctor Beates, for bringing these new-old truths out into the light again, at a time when men are laying aside the old prejudices and seeking for the truth.



Leading Articles

Fragilitas Ossium, With Report of Three Cases^{*}

By FRANK L. ROSE, M. D., Jackson, Michigan

FRAGILITAS ossium may be defined as a disease or a defect characterized by abnormal brittleness of the bones, with a tendency to fracture on very slight provocation. It was first described in 1838, by Lobdell, who named it osteopsathyrosis, the Greek equivalent of fragilitas ossium. It is also known as Lobdell's disease. Though the term is often used to denote brittleness of bone from any cause, as, for example, old age, tumors in or adjacent to bone, syphilis, osteomalacia, et cetera, it is not so used here, but, as the name for a distinct pathological entity, and is so used by most writers. This condition may be grouped with rickets, osteomalacia, and osteogenesis imperfecta, since all are characterized by a disproportion between the animal and mineral constituents of osseous tissue; but, clinically as well as pathologically it differs from all the others of the group; from rickets, in the fact that bones break and do not bend, so that the resulting deformity of fragilitas ossium, if any, has nothing in common with those of rickets, namely, no craniotabes, no bowlegs, and no spinal or pelvic distortions. Nor do these children show other associated signs and symptoms that so frequently accompany rickets.

Osteomalacia, a process of absorption of normal mineral matter of bone, is almost wholly a disease of adult life in women, occurring almost exclusively during gestation. It may be said to be practically unknown in this country. Between osteogenesis imperfecta and fragilitas ossium,

however, the line is less clearly drawn, and many authors seem to consider these terms synonymous. However, in osteogenesis imperfecta, the fractures occur *in utero*, the bones are extremely small, and very rarely, it is said, does the child reach its second year of life. The two conditions seem of equal and extreme rarity, there being but 130 cases of genesis imperfecta on record, according to Keen, while about the same figure would seem to hold for fragilitas ossium.

Three Personal Cases

The three cases which I am now reporting are all in children of the same family and have all been, at various times, under my observation and care as the fractures occurred and until firm union was in each case secured. I have represented these cases, together with others of which I have a history only, by the accompanying chart, which requires brief explanation (see page 814):

The perpendicular are ancestral lines, or lines of descent. The horizontal are family lines, that is, showing brothers and sisters of the same family. The squares represent male, the circles female, the shaded those who have shown evidence of osteopsathyrosis, the white those free from it, the figures in parentheses showing the number of fractures sustained, while the figures not enclosed are for convenience of reference, only.

Record of the Fuller Family

The Fuller family of Jackson, Michigan, consists at present of:

a. George Fuller (No. 4 on the chart), aged 51, laborer, of good health and

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metabolism. The x-ray, when employed, as it was, under most of those under my care, showed the fractures to be invariably transverse; therefore, adjustment and retention were easy, and, for the same reason, the fractures were relatively painless, though by no means absolutely so. However, they showed a marked tendency toward angular deformity, which in one case necessitated refracture, and which resulted in decided improvement, although not in complete restoration of normal contour of the limb. All writers agree that most of the victims of fragilitas ossium grow up with more or less deformity, from faulty union, and it must be remembered that in cases of fracture of the lower limbs they lose much time from school.

As to the Cause

No one can be confronted by these deplorable accidents thus occurring in such great succession nor contemplate the fell course of this unique and sinister disease through generation after generation without experiencing a lively desire to learn something of the cause and its pathology, and, if possible, of its treatment. If he turns to the literature of the disease, however, he will find it most meager and disappointing. The most complete discussion I have found is in Osler's "Modern Medicine", first edition, in Emerson's article on fragilitas ossium. Warthin's discussion in the "Reference Handbook of Medical Science", third edition, is brief, but, more satisfactory than most of the others, since this author devotes some space to a discussion of the pathology of this disease and quotes one author, who explains it as due to a deficiency of internal secretion.

Reports in periodic literature consist mainly of details and in only one, that I have seen, has any scientific study of any particular case been undertaken. In that case—described by Bookman, of New York, and reported in *The Archives of Internal Medicine* (vol. 8, p. 675), the metabolism in a case of multiple fractures was care-

fully studied. In this case, it was found that calcium was excreted in large amounts through the urine. The significance of this fact, as I view it, will presently appear.

Phosphorus Deficiency, and the Thymus as a Possible Factor

No one, so far as I know, has suggested the thymus as a possible factor, and, in mentioning it as such, I should like to have it regarded as a suggestion merely, and as nothing else; the functions of the gland not yet being fully enough understood to enable one to make any positive assertion. It would seem to be fairly well established, although not undisputed, that the thymus exerts a regulative action on the supply of calcium salts to growing bone, thymectomy in growing animals and in at least one reported case in a 2-year-old child having been followed by softening and bending of the bones and the usual phenomena of rickets. These symptoms, when occurring in thymectomized animals, are promptly removed by reimplantation of the gland. That phosphorus is the element thus withheld is shown by the fact that calcium is excreted in unusual amounts; which, of course, must mean that the calcium which normally should combine to form calcium phosphate is compelled, by the absence of phosphorus, to form other, soluble compounds and, so, be excreted.

Further study of the physiology of the gland, which, Sajous claims, is a prime source of phosphorized compounds, is necessary to show whether the hypothesis I have ventured to suggest has any value or not.

Discussion

Dr. Haass: A metabolic study of such a disease is very inaccurate because of the difficulty of measuring the exact intake and output of calcium. In a case under observation there was a constant calcium deficit and it was not influenced by feeding glands having an internal secretion. However, feeding calcium does have some beneficial effect.



After Thirty Years—VII

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

(Continued from October issue, page 744.)

Consultations

IN grave cases, consultations between physicians are desirable and should be resorted to more often than they are. If rightly conducted, these consultations are a source of confidence and satisfaction to the patient and his friends, no less than to the attending physician. They give the former the assurance that nothing tending to his welfare has been neglected, while for the latter they tend to divide and lighten the burden of responsibility by sharing it with a colleague. The latter consideration may be far reaching in its effects, especially where a case terminates fatally or results in permanent disability or deformity. When a mother is taken away from the children that need her care and they are left to the tender mercies of the world and a stepmother, the doctor who tried his best to save her life may feel many a pang of regret when he looks at the helpless brood; however, this regret will be untinged with self-reproach if he feels that the responsibility was shared by the best consultant available and that every resource of science was brought to bear to avert the sad catastrophe.

Many of us have known the humiliation of seeing, from year to year, among our clientele some old fracture or dislocation that despite our best efforts resulted in deformity or disability. If we had the help of counsel at the time, we are more likely to have a clear conscience, to say nothing of feeling better protected against that *bête noire* of the surgeon, the suit for damages.

The laity sometimes have peculiar ideas in regard to consultations. A baby had pneumonia. The father suggested a consultation; but, I soon found that his idea of it was, to call in a doctor in my absence, get his diagnosis and see whether it agreed with mine. I suggested that it would be more to the patient's advantage if we examined the child together and then consulted as to the treatment. The man replied that that would make it possible

for the doctors to cover up each other's mistakes, and that they would agree as a matter of course. I told him that his frankness was more conspicuous than his intelligence. Such big words were beyond his depth and he looked at me with a nonplussed air that reminded me of the story about Professor Huxley and the Billingsgate fishwife. The great scientist was, one day, passing through that famous market where tradition says that we may hear the English language in its purity from the lips of woman. Examining the layout in one of the stalls, Huxley questioned its freshness, whereupon the presiding woman turned loose upon him her choicest battery of vituperation. When at last she paused for breath, he cut in, calling her a troglodyte, a dinotherium, a glyptodon, a bifurcatable hypotenuse of a trigonometric dodecahedron, and a score of other scientific and linguistic polysyllabics. Utterly dazed, the jaws of this expert in tongue-bombardment dropped, and she just blinked at him, entirely crushed and vanquished.

What Consultations Should Not Be

As a matter of fact, doctors are not infrequently called to see a new patient, only to find, upon arrival, that another doctor already is in charge and that the people wish an opinion without the latter's knowledge. Such treachery to their physician would merit a severe rebuke, were it not that they are acting thus partly from ignorance and partly driven by extreme anxiety. Of course, the doctor who is thus called to another's case should absolutely refuse to examine the patient or express an opinion, while suggesting that the proper way to get his opinion is, to have him meet the family-physician in consultation.

Apropos of the subject of consultation, there is a story, that, while quite old, still, is good enough to bear repeating. A wealthy old gentleman had some chronic disease and called a council of several doctors to deliberate on his case; but, entertaining some doubts as to whether they would frankly tell him just what his chances were, he

took the precaution of concealing his valet in a closet off the consultation-room, with instructions to listen carefully to all that the doctors said. Then, after they had departed, he asked of the man: "Well, what did they say about my getting well?" "Why," replied the valet, "they didn't say anything about that, at all. They were talking all the time about how big a bill you would stand for without kicking."

A request from a patient or his friends for a consultation should not be regarded by the attending physician as an expression of lack of confidence in himself, nor should such a request from the physician be viewed with alarm by the patient as an indication of extreme danger. The public should be educated to the idea that a consultation, to be of real value, should be held before the patient is in imminent danger. They should also be taught that the function of the consulting physician is not, to sit in judgment upon the attending physician's diagnosis and treatment and then to announce his decision to the patient and his friends. Another common error is, the idea that the consultant necessarily is possessed of greater skill than is the attending physician. Of course, it is usual and desirable that for consultant some one of long experience and acknowledged skill should be selected, and, indeed, in certain conditions and diseases, a specialist in that line is chosen. However, this in no sense belittles the skill of the attending physician, while in one respect he has an advantage over the consultant, in having had the progress of the case under observation from the beginning. For this reason, his contribution to the consultation is of great value, in fact, indispensable.

The real reason for a consultation is pithily expressed in the old proverb, "Two heads are better than one." It is the recognition of a principle constantly governing the decision of weighty questions in the world of business, law, politics, war or what not. In such affairs, the combined counsel of several minds is found necessary, and even more should it be so when life itself is at stake.

Black-Sheep Consultants

Consultations are sometimes discouraged by the attending physician, because he fears that he may not get justice at the hands of the consultant, and it must be admitted that too often there is ground for this fear. The medical profession unfortunately con-

tains a few black sheep, and they are not all found in the humbler ranks. We have, probably, all had the experience of having a consultant so conduct himself as to ingratiate himself with the family and sooner or later supplant the family-physician. The ways taken to impress the family sometimes are very cunning. One man will make an imposing display of unnecessary instruments or apparatus, another will deliver a pompous lecture, with a great show of knowledge, still another will refer to his overwhelming practice.

The Only Right Way

When a doctor has acted as a consultant in a case, having been called by the attending physician, if he should be urged by the family to take charge of the case, there is but one honorable answer he can give, and that is, a firm refusal. If the request comes some time afterward, in another illness he must decide according to the circumstances, always treating the other doctor as he would wish to be treated himself. If his acquaintance with the family was solely due to the attending physician's introduction, it is difficult to see how he could supplant him without losing his self-respect. Of course, the family have an undoubted right to change their physician, but, a doctor also has an undoubted right 'o refuse to do anything that might cost him the respect of his colleagues.

Some years ago, I sent a pregnant woman to an expert, for an examination and an opinion. During the remaining months of her pregnancy, this man called twice at the woman's residence and urged her to come to his office for another examination, asserting that he wished to study her case more closely, because it presented some unusual features. She informed me that in these interviews, while he did not directly ask her for an engagement, he always talked as if he took it for granted that she would come to his private hospital for her confinement. When labor set in, he sent his assistant with a carriage to bring her to his hospital. How he knew that labor had begun, I never learnt for certain, but, I suspected that he had engaged, as a scout, a woman who lived in the same building as my patient and who probably notified him when labor did set in. My patient sent the assistant and his carriage back, with the message that when she wanted the services of Doctor Blank she would send for him. The next time I saw

the doctor, I told him plainly just what I thought of him, and in doing so I developed a fluency and grace of expression of the possession of which I was not aware. No, friends, I will not give my exact words, because this journal has to pass through the United States mails. This man was, at one time, a high official in the American Medical Association and well known in the profession. Such conduct from such a man seems unbelievable, yet, it all happened just as here described. He was too orthodox to hold consultation with a Homeopath—the gnat was too much for him, but, he swallowed the camel without winking.

How to Go About It

The request for a consultation may properly come either from the patient or from his family or from the attending physician. The selection of the consultant usually best is left to the attending physician, because he is better able to judge of the fitness of the available men than any layman can be. The layman has no very reliable means of judging any doctor's skill. As a rule, his opinion of a given physician is based upon the laudation or criticism of some neighbor or friends. There are instances where the family desires the advice of a former family-physician or of a doctor that is a particular friend, and such requests should always receive courteous consideration.

The attending physician has an undoubted right to refuse to meet any doctor whose methods are dishonorable or whose ignorance or quackery would render a consultation valueless.

The question of meeting in consultation with any of the so-called irregulars may, I think, be safely left, as the code leaves it, to the judgment and common sense of each individual physician. It requires no great amount of intelligence to see that, if a Homeopath, for instance, were a strict adherent to the doctrines of Hahnemann, a consultation between him and a regular could have little value, because it would be a foregone conclusion that they could not agree on treatment. This is so patent even to the laity, that such a meeting rarely is asked for. However, most so-called Homeopaths, nowadays, are not strict followers of the teachings of Hahnemann, and they give any remedy that they believe will benefit their patients. While I think that their position would be stronger if they

abandoned the name "Homeopath," that has not prevented me from meeting some of them in consultation when it was particularly desired by a patient, and I have never found that either of us was contaminated or sacrificed his self-respect by the contact. On the contrary, we learned tolerance from each other, and many of them today are my personal friends, just as I have personal friends among men differing with me in politics or religion.

How to Conduct a Consultation

The manner of conducting a consultation is a question that well may be left mainly to the good sense of those holding it. There are a few points which, however, experience has shown to be important.

The consulting physician should, of course, make his own examination of the patient in the presence of the attending physician; whether in the presence of the patient's family or friends, is not a matter of importance. After the examination, the doctors should retire for consultation, which should be absolutely private, because the average layman knows just enough about medicine to misunderstand the discussion that must take place. The medical men should not be hampered in this discussion by the presence of anyone not entitled to a part in it. If such a one should ask to be present or intrude his presence without asking, it is the consulting physician's part to request him to withdraw, as the attending physician might hesitate to give offense by so doing.

If difference of opinion arises in a consultation, every effort should be made to deal with the matter in a conciliatory spirit, and both parties should be willing to concede considerable rather than to announce an irreconcilable disagreement. Such a statement would be very prejudicial to the welfare of the patient, besides hurting the profession in the eyes of the public, who are but too ready to cavil at doctors' disagreements.

If reconciliation proves impossible, then the fact must be reported to the family and such action decided upon as may seem best under the circumstances. They may have such confidence in the attending physician that they will wish his views to be carried out; or they may ask for another consultation with a different personnel; or they may ask to have the consultant take entire charge of the case. The latter outcome creates an unpleasant situation all around.

If the consultant was chosen by the family in the first place and after the consultation they wish him to take charge of the case, the attending physician had better retire gracefully. They have the right to change doctors. If, however, the consultant was introduced to the family by the doctor in charge, then he can not play the part of a supplanter without losing his self-respect and the respect of his friend, who called him in.

After a consultation, thoughtless people sometimes attempt to confront the consultant with such questions as: "Does our doctor understand the case?" "Has he been using the right treatment?" Or they may ask their own doctor: "What does he think of the case?" "Did he order any change in the treatment?" To cut off all such improper questioning, the doctors should, immediately after the consultation, jointly call together in a room those entitled to know and give them as full information as is consistent with the welfare of all concerned. This is what they pay for and what they are entitled to. I have known consultants to depart after a consultation, without a word to the family, leaving the attending physician to do all the explaining; and I have known it always to cause a feeling of disappointment and resentment.

The prognosis is really the point in which

the family are most interested and about which they ask questions most eagerly. But, while a reasonable regard should be had for their anxiety, it is well, as a rule, to remind them that this is not the most important object of the consultation; that, rather, as physicians, we are more interested in the practical questions of whether we correctly understand the disease and whether we can improve the treatment.

If the proper cordial relations obtain between the consulting physicians, the attending physician may ask the consultant to talk to the family, either alone or in the presence of himself. If he is tactful, he may do much to strengthen their confidence in their doctor and set at rest their anxieties. This is a matter of no small importance, for, if they give their doctor their full confidence, he can accomplish far more for the patient than he can in an atmosphere of suspicion.

If changes in the treatment are decided upon at a consultation, they should not be made at once, but, introduced gradually. Human nature is so prone to suspicion that an immediate change is almost sure to be interpreted as a sign that the former treatment was wrong. However, it is seldom that conditions are such that an immediate and radical change is necessary.

[To be continued.]

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The Treatment of Chronic Diseases

Diseases of the Nervous System

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(Continued from October issue, page 758.)

Chorea

CHOREA may be regarded as the counterpart of epilepsy; the obverse manifestation of the same fundamental nervous instability. These two conditions, in fact, bear about the same relation to each other in the neurophysical realm that melancholia and mania do to each other in the neuromental field. Hence, it is not surprising that, just as we have manic-depressive states in mental diseases, which partake of the qualities both of melancholia and mania, so we have epileptoid-choreic states in

nervous diseases, representing a mingling of epilepsy and chorea, so that a definite diagnosis sometimes is very difficult, if not impossible.

Fundamentally, then, the objective of the treatment in chorea is the same as that of the management of epilepsy; namely; to assist the organism, both by removing all sources of irritation and nerve leakage, and also by positive therapeutic measures, in order to establish its nervous and biologic equilibrium. And so far as the negative side of this therapy is concerned, it is the same in both. In the question of positive therapeutics, however, the means to be em-

ployed in typical chorea are, of course, precisely the reverse of those that we employ in typical epilepsy.

As a first measure in chorea, then, we must, as in epilepsy, go over the patient's entire anatomy and physiology, and remove or correct every source of nervous irritation or nerve drainage. And these will be found to consist in about the same general class of focal disorders as in the other disease. Chorea, being a biological disease, usually is attended by a set of physical stigmata such as errors of refraction, malformations of the rhinopharyngeal passage, defective metabolism and elimination, and the like, all of which must be corrected or compensated if the patient's organization is to have a full and free opportunity to restore its own nervous balance. And, as often as not, a proper attention to this negative side of the treatment, together with good hygiene, is sufficient for a cure; for, there seems to be a more ready disposition on the part of this exalted phase of nervous instability to right itself than is true for the debased phase, just as there is a greater disposition for an elevated temperature to drop than for a subnormal temperature to rise to normal.

Treatment of Chorea

The positive measures employed by us to assist the nervous system in regaining its poise as intimated, are in a typical case of chorea just the reverse of those used in a typical case of epilepsy, because the deviation from the normal is toward the opposite side. In epilepsy, the gross, physical elements of the body are exaggerated at the expense of the finer, the nervous and mental, elements. Consequently, we train down the former and allow the latter gradually increasing play, sedating the brain only to the point of steadying it. In chorea, the nervous and mental elements are exaggerated at the expense of the physical, so, we build up the latter and give the former all the physiological rest we can procure for it.

The great *sine qua non* of treatment in chorea is rest. Without it, all other treatment is useless. With it, the patient often will recover in the absence of any other treatment. The child not only should be taken out of school or removed from its work, but, actually put to bed or at least be made to lie down and sleep several hours during the day. If necessary, it is permissible in

this disorder, if anywhere, to procure a requisite amount of sleep by the use of soporifics, such as passiflora or chamomile-tea. Every hour of sleep that those patients get adds to the chances and subtracts from the necessary time of their recovery. Refractory children whom their parents are unable to control should be removed from the care of their parents and put either in a hospital or in charge of some disinterested but impartial person. For, moral control is, of itself, a great aid to recovery.

The second requisite is fresh air, which is quite as important in this disorder as it is in tuberculosis. Choreic children should practically live in the open air day and night. If this can not be done in its completeness, it should be carried out as nearly as practicable. The same active provisions should be made for it as we insist upon in the care of tuberculous children. Sea-air is ideal.

The third essential is good nourishing food and plenty of it. In this respect, also, the choreic should be treated like the tuberculous. He should be subjected to forced feeding. This is not always easy, for, at first the choreic patient has a very poor appetite, and it is as hard to make him eat as it is to get the epileptic to refrain from eating. A little patience and tact, however, usually will overcome the difficulty. But, if it cannot be done in any other way, the nutriment must be given for a time by rectum or as an emulsion or in any other practicable way.

One of the prime indications of improvement in the choreic, as in the tuberculous, is that they gain in weight. The diet must, of course, be simple, easily digested, and yield the maximum of nourishment for the minimum of work. Fresh eggs, milk, cereals, bacon, green vegetables, cooked fruits, and occasionally broiled lean meats should form the staple of their food. They must, on no account, drink coffee or tea; cocoa is an excellent drink, if it agrees. Due regard must meanwhile be paid to the elimination of this foodstuff. Choreic children, the same as epileptics, are constipated as a rule, and, furthermore, they usually eliminate their protein-products with slowness, the urine being scanty and of high acidity. It is necessary, therefore, as a rule, to give them mild stimulative cathartics, such as ipecac, nux vomica, and cascara, with an occasional laxative saline in the morning—

for example, sodium phosphate. The kidneys may be stimulated with alkaline and citrous drinks.

In our drug-therapy, the same principle holds. If the case be a frank and typical one of chorea, as distinct from epilepsy, our remedies should be designed to build up and mildly stimulate the nervous system, while at the same time soothing and sedating the mind. Such calmatives as we give for the purpose of controlling the choreic movements are mere temporary measures and should be directed either to the muscles themselves or to the spinal neurones. Gelsemium and macrotin are the best drugs for this purpose, if given in quite full doses. Since the movements cease during sleep, the ideal way to procure rest for the muscles is, to procure sleep for the patient; and this is also a prime, fundamental therapeutic measure for the restoration of the nervous balance. I repeat, therefore, that, if ever there is justification for the artificial forcing of sleep by any means short of actual habit-forming narcotics, it is in the treatment of chorea. The old-fashioned practice of boiling chamomile-flowers and giving the patient infusion to drink is a capital one, in that it not only induces a wholesome sleep, but, improves the appetite and digestion.

At the same time that the function of the brain is being rested to the greatest possible extent, the nerve-tissues themselves are to be built up and the nutrition of the body stimulated by arsenic, of which the best form is Fowler's solution. I agree with Doctor Sachs that, if this drug is to do any good in chorea, it must be given in larger doses than is generally recommended, especially at first. I am in the habit of giving it to children between eight and twelve years old in doses of 8 or 9 drops twice or thrice daily, until they begin to complain of abdominal pain, when I gradually reduce the dose to the maximum of tolerance, and keep it there until marked improvement shows itself. It is a good idea, however, to combine the arsenic with an alkaline and a mild bitters, such as milk of magnesia and gentian, to make it more tolerable to the stomach. The anemia is best combated, not with iron, but, with nuclein, which, with the arsenic, makes an excellent hemopoietic.

As convalescence progresses, of course, the patient may be allowed more and more

exercise and permitted gradually to assume an active relation to life. But, it is a great deal better to be a trifle too slow about this than a bit too hasty; for, a little delay will hurt nothing, while a day's undue and premature hurry may set the patient back for several weeks.

Consistent with the biologic nature of the disease, choreic patients often are the victims of congenital endocarditis and valvular disease of the heart; or they will be found to have suffered from tonsillitis and attacks of acute rheumatism, which have affected the heart-membrane. These conditions must be properly treated. Arsenic, however, is an indicated remedy in them all.

Paralysis Agitans

(*Shaking Palsy. Parkinson's disease.*)

There are no known means of influencing shaking palsy, the pathology of which is but little understood. The disease runs an exceedingly chronic course, mostly terminating in an intercurrent affection, and recovery has never yet been observed. The most that can be done is, to maintain good hygienic conditions and to control the tremors by means of lukewarm baths, gentle massage, and faradization, and by the internal use of gelsemium and hyoscine. It is well to give Fowler's solution or chromium sulphate or ergotin, with a view to retarding, if possible, the degenerative process, whatever it may be. But, no further benefit can be expected than the partial control of the tremor and general nervousness, as above stated.

Hysteria

From a clinical standpoint, there is more than a mere difference of degree between minor and major hysteria. There is the much more vital difference that in the former variety the control of the paroxysms is still within the power and will of the patient, while in the latter the whole affair has got beyond the reach of the woman's conscious volition; the therapeutic significance of this is, that in minor hysteria the aim of our treatment must be, to arouse, by whatever means seems most appropriate to the case in hand, the will of the patient; whereas, in major hysteria, we must direct our attention to the subconscious element. To be sure, even in minor cases, we are obliged to work indirectly, since the patient almost never *wishes* to overcome her trouble (therein differing markedly from the major patient, who would gladly overcome it, if she could); we must, in fact, surprise

her into exercising her will-power, and this often has to be done by rather rigorous, not to say violent, measures, such as would destroy the last vestige of our influence over the major patient.

Hysteria is essentially a mental disorder and calls for mental treatment. Medicines are of little or no value. Here, the physician is, himself, the medicine, and, unless he possesses the necessary tact and patience to array himself in a continuous and resourceful battle of wits, he had better not undertake the treatment of such a case. In minor hysteria, as intimated, the constant aim of his treatment is, to break through the patient's guard and to be indirectly arousing in her some antagonistic phase of her will, that is, to get her unwittingly to take action against her own condition. Pages might be filled (and often are rather foolishly filled) with minute details of how to accomplish this end. But, the fact is, there are no set ways and means of doing it.

Each case is a law unto itself, and success depends upon the acuteness of the physician in taking advantage of the exigencies of the occasion and the temperament of the individual patient. Ridicule, anger, indifference, fear, surprise, all are useful aids in the case of various patients and at various times in the same patient. An attack often may be cut short by the judicious administration of an emetic or a sharp purge, since it is impossible for the patient to maintain an interesting pose or to sustain a battle of mind with her attendants at the same time that she is obliged to vomit or empty her bowels. The same result often is attained by dashing a glass of cold water in her face or by saying or doing something to arouse her anger or by affecting to take her condition with extreme gravity and talking ominously of the necessity for an immediate surgical operation. These and all the other hundred and one methods that are commonly cited have the same underlying psychic objective, namely, breaking through the patient's guard and enlisting her own will-power in breaking the spell.

These measures may, also, be made to have another salutary effect. Inasmuch as hysterical patients of the minor type invariably indulge in their attacks in the presence of another person (as a rule some sympathizing relative or friend—which seems to be an essential element in the process) it is well that the "exposure",

so to speak, should also take place in the presence of that same observer. In this way, the subtle element of imposition and play for sympathy, which forms so large a part of the condition, is destroyed. Withal, the physician must manage to achieve all of this difficult and delicate task without losing any of the real confidence and friendship of the patient; for, if he forfeits this, his influence is at an end.

In short, the matter may be summed up in the statement that hysteria, like most of these functional nervous disorders, is a biological condition. It is a species of infantilism. It exhibits itself chiefly either in adolescent girls, in whom the child is struggling violently with the woman for supremacy, or else occurs in older women of an infantile type, in whom the child is always dominant. (Frequently barren women, with infantile generative organs, who have never borne children.) Its treatment, therefore, is essentially the treatment of unruly children who are "spoiled."

Major Hysteria

Medicinal and even surgical treatment is not infrequently called for. Genuine uterine troubles may lie at the root of the disorder and demand correction. In typically infantile cases, extract of corpus luteum often works wonders. In all cases, it is important to maintain good elimination, both by the kidneys and by the bowels, and to avoid harmful mental excitement. Valerates and monobromated camphor sometimes are useful in sedating the overwrought nervous mechanism.

Major hysteria is a much more serious and difficult affair to handle. These patients should never be treated in their homes. It is almost impossible to do anything with them while sympathetic and fussy relatives and friends are in the way. They should be removed to a good hospital or sanitarium and put in the care of experienced attendants who know how to manage them. And, really, this and a sedulous care of their diet and of elimination is about all that can be done for them in the way of physical treatment. The rest is purely psychic and moral.

As stated, the physician's influence must be exerted altogether through their subconsciousness, so far as their disorder is concerned. It is useless to try to arouse their own will against it, for, they have no conscious will in the matter. It is in-

advisable, even, to discuss their disease with them at all. But, by constant, unwavering kindness and care, the patient's confidence must be gradually and unconsciously won, so that she comes to know that her doctor and her attendants are her genuine friends. And, finally, when, through this subconscious process, her will is reestablished and can be brought to bear upon her condition, it will be found that it is readily and even eagerly enlisted on the physician's side, and can usually be relied upon to head off future attacks. But, if another attack occurs, the same pa-

tient painstaking process must be gone through with again, until she finally develops mental power enough to carry her along without any recurrences. Never at any time should the slightest alarm or fuss be manifested about her condition, and especially when she is coming out of one of her seizures nobody should evince in her presence the least concern about it or look or speak as though anything out of the way had occurred. And, upon sending the patient to her home, her parents and associates should be admonished to maintain this same attitude toward her.

The Anatomy and Physiology of the Stomach

By A. L. BENEDICT, A. M., M. D.

Editor *The Buffalo Medical Journal*, Captain, M. R. C.

(Continued from October issue, page 762.)

The Exploded Tidal Theory of Digestion

A FURTHER point in regard to reaction may be mentioned. It has long been taught that the urine shows tides of alkalinity, corresponding to the withdrawal of acid radicles from the blood during the period of gastric secretion, and of acidity corresponding to the alkaline secretion of the intestine and its tributary glands. This may be denied, except in an academic and quantitatively negligible sense. The denial is based upon two reasons: (1) Actual titration of the urine in hourly or 2-hourly periods shows that the timehonored and very plausible theory accepted for a century or more simply isn't so. (2) If we remember that the tidal theory is based upon an exploded theory, that gastric digestion lasts for a fairly definite period of several hours, at the conclusion of which the stomach empties itself all at once into the intestine, whereupon an alkaline digestion begins and continues for a definite period, we can easily see why it is no more correct in theory than in actual fact.

The two kinds of digestion occur jointly, except that the acid type is limited to certain periods after meals and has intermissions, whereas the alkaline type proceeds almost continuously. Furthermore, chemi-

cal radicles, either acid or alkaline, abstracted from the blood are very soon available for reabsorption, so that the blood never departs much from a normal standard.

Comments on the Foregoing

The foregoing statements, however, require a slight qualification. For example, a hyperchlorhydria with isochymia that prevents the rapid absorption of acid radicles into the blood, plus a failure of coincident secretion by the liver and pancreas, would, theoretically, cause an increase in the alkalinity of the blood and either a marked diminution of activity or an actual alkalinity of the urine. Practically, we do encounter cases of hyperchlorhydria with such a tendency of the urine away from its normal acidity, though not, in my experience, with actual demonstration of the explanatory factors mentioned. Conversely, marked hyperchlorhydria and especially achylia gastrica, should result in an enormous increase in urinary acidity; but, this connection I have not observed practically.

It is obvious that hydrochloric acid is, ultimately, derived from chlorine compounds ingested, this ingestion being almost entirely in the form of chlorides, and mainly in the form of sodium chloride. The liberation of hydrochloric acid from a basic

chloride, in the laboratory, ordinarily is effected by the addition of sulphuric acid, so that we may truly say that the secretory power of the acid-secreting cells of the stomach is equal to the chemic energy of sulphuric acid. Theoretically, and to a considerable degree practically, hyperchlorhydria is controllable by a limitation of salt in the diet; still, as in similar problems of producing or supplying a deficiency generally, the organism may hold on to its existing supply—or, in other instances, fail to avail itself of an artificial source of supply of a deficiency—for a long time.

As has been demonstrated by Pawlow, although long understood on inductive reasoning, anything that requires a given secretion or function tends to develop that secretion or function, while anything that does not require it tends to its abeyance. Hence, a considerable ingestion of salt and of proteid, especially meat-proteid, as a rule is accompanied by hyperchlorhydria, while a diet rich in carbohydrate and fat discourages this secretion.

On this general principle, is founded the dietetic treatment of hyperchlorhydria and the reverse. But, it should be recognized that an excess of salt, sugar, starch or fat may, and often does, immediately irritate the stomach into producing a still greater excess of hydrochloric acid, so that an excess of proteid may, by fixing hydrochloric acid, diminish the net activity, and that, as in anemia, the mere furnishing of raw materials of favorable conditions for a certain physiologic result, may not produce that result.

It has been taught for some years that hydrochloric acid is secreted by peculiar, granular cells, of which only a few are present in any given gastric tubule. These, from their supposed function, are called oxyntic, or acid, cells; from their location, rather less directly in contact with the lumen of the tubules, parietal. In distinction, the more common type of cells lying directly on the lumen are supposed to secrete ferment and are called chief or peptic. Recently, there is a tendency to deny the essential difference of these types of cells.

In passing, it may be remarked that lactic acid was for a long time considered the secretion of the stomach. Actually, it is merely an adventitious result of bacterial fermentation, it is not concerned directly

with proteolysis, and is not even especially derived from milk, although produced from lactose, but, also, from carbohydrates generally.

It may also be pointed out that hydrochloric acid is not particularly associated with gastric ulcer. Ewald collected a large number of analyses which showed that about half of ulcer-cases were accompanied by normal acidity, about one-fourth by increased acidity and about another fourth by diminished acidity.

Ulcer, either gastric or duodenal, does not tend to develop as the aftermath of a series of cases of hyperchlorhydria, nor does a series of ulcer-cases present any marked influence of prior hyperchlorhydria. The belief to the contrary may be explained as follows:

Almost everyone has an excess of hydrochloric acid at times, from dietetic indiscretion or some form of emotional disturbance. In addition, a great many conditions, as of the appendix, gall bladder, and in fact of almost any viscus, not to mention disease in general, may more or less accurately follow the symptomatology of hyperchlorhydria. Thus, of course, any one imbued with the notion that hyperchlorhydria and ulcer are closely related can elicit a history of antecedent hyperchlorhydria in all patients presenting themselves for ulcer, except those who are dumb, who cannot express themselves in a language understood by the questioner, who have never paid any attention to their symptoms, or who have maintained previously an absolutely normal gastric physiology.

Pepsin

The only other well-demonstrated gastric secretion is pepsin or, according to most authorities, pepsinogen, the latter activated into pepsin by hydrochloric acid. So far as my observation goes, pepsin is always present if there is any secretion of hydrochloric acid at all, and I do not remember ever to have demonstrated the presence of pepsinogen in patients who had absolutely no secretion of hydrochloric acid—reference being made, not to free hydrochloric acid, but, to hydrochloric acid in any degree forming protein combination even if immediately fixed, so as to leave no excess of free acid.

The practical moral—subject, of course, to contradictory evidence in any conceiv-

able future case—is, that one need never give pepsin unless there is a definite proof of its absence; that is to say, in cases of *achylia gastrica*.

Achylia gastrica occurs in two pretty sharply contrasted types; temporary defects of secretion from chilling, the depression of general diseases, some form of shock, and so forth, in which the stomach should be allowed to rest, and permanent cases, in which neither artificial supplying of hydrochloric acid and pepsin nor any other treatment has, in my hands, effected relief. In most of the latter type of cases the subjects maintain good general health for years, the stomach merely acting as a macerating chamber preliminary to intestinal digestion; and, indeed, even in health, the actual amount of protein digestion carried on by the stomach probably amounts to only about 10 percent of the total. When intestinal digestion fails, when half or more of the small intestine has been removed or when for any reason the food does not pass through half or more of the small intestine (as after short-circuiting operations) nutrition gradually fails.

Denial of Rennin

The statement that the only well-demonstrated secretions of the stomach are hydrochloric acid and pepsin, will, undoubtedly, be criticised as an ignorance of the existence of rennin. The implied denial of the existence of rennin as a distinct entity rests upon a double line of argument.

From the theoretic aspect, there are three significant facts to consider: A pure ferment has never been prepared. Not only has pure pepsin or pure rennin never been prepared, even on a laboratory scale, but, no extract ever has been prepared that could be considered as a pepsin plus inactive impurities, but, free from rennin, on the contrary.

All proteolytic ferments, even of a vegetable nature, coagulate milk. Milk-globulin (caseinogen) is the only substance used as a food for which anyone has claimed an exclusive coagulant or even an exclusive ferment of any kind. The practical argument against a separate rennet-ferment is, that, in thousands of examinations, it is only occasionally that even the most cursory tests appear to show the presence of peptic power without milk-coagulating power, or the reverse. Once in a great while, one

finds an apparent instance of proteolytic gastric juice that does not coagulate milk or the converse. In the former instance, the chances are that the milk has been rendered noncoagulable by pasteurization at too high temperature or has spoiled. In the rather remote past I made notes of a few stomach contents that would peptonize albumin, but, would not coagulate milk. None have been found after controlling the sample of milk. Similarly, apparent instances of milk coagulation without peptonizing power have been explained, since the necessity of controlling such reactions has been appreciated, on the following grounds:

In some few instances of carelessness, the peptonizing and milk-coagulating power were both absent; but, the latter was marked positive from using a sample of gastric juice to which an excess of hydrochloric acid had already been added previously to the digestion-test, so that coagulation occurred from the acid and not from the ferment; in other instances, there was a slight coagulating and peptonizing power, but, the first was noticed, while, from using stale coagulated egg-albumin or relying merely upon the apparent lack of dissolution of the mass after incubation, it was assumed that peptonization was lacking. All controlled tests have shown that the peptonizing and coagulating functions were either both present or both absent.

As to the Lipolytic Ferment and Ptyalin

Within the last few years, quite a little has been written about the fat-splitting power of the gastric juice. This is admittedly of very small degree and of no physiologic or clinical importance. Even theoretically it is probable that there is no such function and that the apparent exceptions noted by delicate tests are explained either by the liberation of fats by proteolytic digestion or by the connective-tissue envelope and some degree of emulsification in the warm contents of the stomach, or by the adventitious action of microorganisms, or by the penetration of pancreatic juice, bile, and intestinal juice past the pylorus.

Another important digestive function that occurs in, but, neither of nor by, the stomach, is that concerning carbohydrates. Ptyalin of the human saliva digests starch, through various dextrin stages, into maltose, the latter a double dextrose. Human

saliva is able to digest only cooked (not merely boiled) starch, probably because it can not dissolve the film of cellulose, while able to digest the liberated granules of starch. The saliva of monkeys and grain- and nut-eating rodents can digest raw starch. The pancreas contains a ferment, amylpsin (or possibly, as for peptic and rennin action, this is merely one phase of activity of a general pancreatic ferment) which digests both cooked and raw starch, although, like ptyalin, only to the stage of maltose.

Whether there is any essential difference between ptyalin and amylpsin or whether the difference is merely one of strength, does not appear. It may be pointed out that the only form of raw starch commonly ingested in any considerable amount in this country, is bananas, and that, beyond mere traces or on account of peculiar habits of eating, the only other form of raw starch taken, even in appreciable though practically negligible quantities, is derived from nuts.

Under ordinary circumstances, the fact that between 50 and 100 Grams of raw starch remains in the stomach undigested, awaiting its attack in the intestine, does no harm whatever. Kellogg has shown that, by very thorough mastication and insalivation, 150 Grams of cooked starch may be digested into maltose at a meal, so that the entire carbohydrate ration could be attended to by this function.

Ordinarily, 50 to 90 percent of starch digestion awaits intestinal digestion. Theoretically and to a large degree actually, hydrochloric acid in full normal proportion or increased in hyperchlorhydria, inhibits ptyalin digestion in the stomach. Practically, sugar is always found in the stomach con-

tents, unless starches have been omitted from the test meal or unless the examination is made very late after a meal. Even in hyperchlorhydria, sugar is present in considerable amounts. So far as I know, the quantitation of sugar in stomach contents has never been standardized nor applied practically.

It will be noted that, whether from the digestion of starch into maltose, by the ingestion of milk as lactose or by the routine use of saccharose, the sugar available is in the form of a double hexose, whereas, the simple hexose (dextrose) is required by the liver for the glycogenic function. It is, therefore, a very plausible though, so far as I know, not a well-demonstrated claim, that the stomach and the intestine secrete some ferment that converts double into simple hexoses.

In passing, it may be remarked that the glycogenic function is one of the most clearly understood physiologic principles, but, that, even in connection with diabetes and glycosuria, it is almost never applied clinically. If one will simply remember the ordinary accepted physiologic teaching and make the obvious application, great light may be thrown upon many puzzling phases of sugar metabolism.

Absorption

The description of the glandular lining of the stomach shows clearly that it is not well adapted to absorption. Volatile substances of foreign nature, such as alcohol and various other poisons, may be absorbed from the stomach. So far as water, salines, and foods are concerned, absorption undoubtedly occurs, although of negligible extent. Superficial evidence to the contrary is based on the rapid rhythmic passage of stomach contents through the pylorus.

If by going without pork I can save a Belgian baby, I am perfectly willing to do it, and I will feel a great deal better for it, and so will you. There is no need for any of us to starve, either here or abroad.—Harvey W. Wiley.

The Reeducation of the Blinded Soldier

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[Continued from October issue, page 747.]

British War-Blind

ENGLAND profited by the experience of France in the solving of her problems of reeducating her blinded soldiers. She learned from them that the training must be thorough and professional—not well-meant efforts of amateurs. A blind man's work must have commercial value and his training should not be considered complete before he possesses a fair speed. The best teacher is one who is an expert at the trade taught and who himself has become blinded. No product should be turned out that depends upon charity and sentiment for its disposal. Another point that the French taught the English to consider is, the selection of work of such quality that the blind man may excel the seeing man in its execution; for, the blind man has the following qualities well developed: (1) Nicety of the sense of touch; (2) unbounded patience; (3) pride in excellent workmanship.

Therefore, work demanding exactness involving repetition of processes is best suited to the training of the blind man. It is difficult for the blind man to learn to make different parts and to put them together, but, repeating a large number of processes, identical, requiring careful finishing lies at the basis of his success¹.

The keynote of the training school provided by the British for their disabled soldiers is, "Hope welcomes all who enter here". What the average blind soldier is most determined about is, that he shall not live an idle life. Most of these soldiers still have fifty years of life ahead of them.²

In England, the government met the demand for systematic training of the disabled by appointing a committee of inquiry, of which Sir George McMurray was chairman. Meanwhile, the pressing demand for treatment and training was supplied by private aid; as, at Lord Robert's Memorial Workshop and St. Dunstan's Home for the Blind. Voluntary

funds tided over the difficult period before definite help was secured from the state.³

Finally, a statutory committee, consisting of twenty-seven members, was appointed. There are representatives of the Crown, the Royal Patriotic Fund Corporation, the War Office, the Admiralty, other government-officers, and of labor. Some of these are women. The function of the committee is, to perform duties in connection with pensions, to provide for care of disabled men, including hospital training and employment; to give aid to widows and orphans that were dependent upon men killed in battle. The state voted one million pounds for this purpose, and did not aim to supplant the private institutions, but, to cooperate with them.⁴

The blind have a capable friend in the generous Sir Arthur Pearson, who himself is blind. By courage and determination, he 'taught himself to be blind', as he so well expresses it. Sir Arthur visits every soldier as soon as he is brought to the hospital and in ten minutes he changes the poor soldiers' outlook upon life. Their quiet despair and boundless misery is changed to hope and courage as the knowledge, that much employment still is in store for them, is unfolded to them by a man who himself is blind. In April, 1915, he opened St. Dunstan's Hotel, the magnificent house and estate of Mr. Otto Kahn, a well-known American financier. This estate has a history. It was built by the Marquess of Hertford, who figured as Lord Steyne, the lover of Becky Sharp in "Vanity Fair." The history which our blinded heroes add to it will increase its historical interest.

This wonderful house has been enlarged, owing to the sadly increasing number of blinded soldiers.⁵ It is known as the "happiest home in London." This institution is partly maintained by the Institute for the Blind, the British Red Cross, and the Order of St. John's of Jerusalem.⁶

³American Journal of Care for Cripples, 5: 95.

⁴American Journal of Care for Cripples, 5: 105.

⁵Pamphlet: "How They Are Being Taught to Be Blind." Introduction.

⁶Journal of American Medical Association, Dec. 25, 1915.

¹Monthly Review of Bureau of Labor Statistics, 4: 851, June, 1917.

²American Journal of Care for Cripples, 5: 125.

The grounds are fifteen acres in extent and an arm of Regent's Lake offers splendid rowing facilities, an exercise that is so beneficial to blind people. Sir Arthur Pearson said that rowing is one of the sports that make the blind men feel that they are conducting other people instead of being conducted by them. The hostel is managed by the Blinded Soldiers' and Sailors' Care Committee, Sir Arthur Pearson, chairman, president of the National Institute for the Blind; Miss E. W. Austin, secretary of the National Institute for the Blind; C. E. Rose, St. John's Wood, N. W., II. Stainsby, Sec.-Gen., National Institute for the Blind; Miss I. G. Mace, St. Dunstan's Regent Park, N. W. Besides, there is an advisory council for giving advice, and assistance when called for.

Besides St. Dunstan's, Regents Park has been loaned to Sir Arthur for the period of the war plus six months. This college could well donate its accommodations, because the war has called away its students. This loan permits extension of the work carried on at St. Dunstan's as the number of blind increases.⁹ The following spacious and desirable annexes have been placed at the disposal of Sir Arthur: the College, Regents Park, 12 Sussex Place, N. W.; West House, Portland House, and 104, Queens Road, Brighton; 40 Lee Terrace, Black Health, Bournbrook, Wells Wood at Torquay, Nervington House Hostel at Edinburgh.¹⁰

The annex at Torquay is used for those blind that remain only temporarily at St. Dunstan's and who need a quiet rest before taking up their work of reeducation. Men that are learning massage live in another house, which is a present from Mr. A. Kilby to the National Institute for the Blind and who, in turn, have loaned it to Sir Arthur Pearson. Two houses in Portland Place are used as residences for officers that have lost their sight. Sir Arthur and Lady Pearson are in charge of one given up by Sir John, while Lady Maxwell and friends of the Pearsons are in charge of the other. The officers in these houses are single. Married officers live in apartments close by and attend St. Dunstan's as day-pupils.¹¹

Members of Sir Arthur's staff visit the

blinded soldiers in the hospitals daily. The newly blinded man is lifted from the depression he has felt by the prompt comradeship offered him. He is told that absence of eyes does not necessarily mean lack of vision, and hope and courage rise in his bosom at the stories of success of his fellow victims.¹²

The blind men have learned that, although much has been taken from them, yet, more is left, and they live their lives with happiness and gay courage. They know they have done their part in conquering a foe that attempted more than to rob them of their sight.

By arrangement with the War Office, the blinded soldiers are sent to St. Dunstan's upon their discharge from the army. Everything that man can conjure for their comfort and their schooling is done. There are now more than 400 inmates at St. Dunstan's and its annexes. More than 225 have been trained and established in business, having learned at least one of the following occupations: massage, shorthand-writing, telephone-operating, boot-repairing, mat-making, basket-making, joinery, poultry-farming, bee-keeping, and market-gardening. The Australian and Canadian authorities encourage their men to take training at St. Dunstan's before returning to their home. There are in Sir Arthur's hostel blind soldiers from Canada, Australia, New Zealand, South Africa, Tasmania, and Newfoundland.

Besides learning an occupation, nearly all the men learn to master braille, to use the typewriter, and to do some sort of netting-work. Those who learn shorthand as a means of earning a living learn typewriting as part of their occupation; but all the others are persuaded to take typewriting, because the penmanship of a blind person deteriorates at a rapid pace. Men who never used a typewriter before becoming blind learn to strike the keys correctly within a few weeks. A typewriter is presented to each soldier when leaving the school; he also is supplied with some braille literature, while the National Library for the Blind has made arrangements to loan the soldiers books free for life and the National Institute for the Blind has undertaken to defray the postage.¹⁴ A copy

⁹Pamphlet: "How They Are Being Taught to Be Blind," pp. 2-3.

¹⁰Report of St. Dunstan's, p. 2, 1917.

¹¹Letter Head at St. Dunstan's.

¹²Report of St. Dunstan's p. 2.

¹³Report of St. Dunstan's, p. 2.

¹⁴Report of St. Dunstan's, p. 2.

of Ivanhoe printed in braille runs into six foolscap volumes.¹⁵

There are a few paid orderlies and trained nurses at St. Dunstan's, but the staff consists principally of voluntary aid detachments, called C. A. D.'s. The foreman in each workshop is a seeing man, most of the instructors, though, are blind and entered the institution just a few months previous to the entrance of their students.

This arrangement of pupil-teachers has a stimulating influence upon the newcomers. The honorary superintendent of the workshops is Mr. C. E. Rose. Miss Dorothy Paine is superintendent of braille and typewriting. Each pupil makes rapid progress, because he has an individual teacher. There are more than a hundred teachers who have offered their services voluntarily. These unselfish devoted teachers make light of obstacles and appear daily at their tasks.¹⁶

The actual reeducation is divided into two sections: classroom work and that of the workshop. Those who are in the classroom in the morning are in the workshop in the afternoon, and *vice versa*. The hours are short: from 9:30 to 12:00 and from 2:30 to 4:30. It is necessary to alternate the work, because the mental strain upon the blind is great, so that, in the long run, more is gained by the change.

Netting is not taught in the workshop except in connection with braille and typewriting. It is not considered an industry, but, offers busy-work for these beginners, who can not concentrate for more than a half hour at a time. It is a pleasant occupation indulged in during spare time and the men take their "netting" with them when they attend weekly debates, concerts, or other forms of entertainment. They learn to net hammocks, string-bags, fruit-bags, and railway-sacks.¹⁷

Sensitiveness of touch, intelligence, and past education determine how much time a man spends in the classroom in learning braille and typewriting. A blind man does not acquire the sense of touch immediately. About 10 percent of the men never learn braille, because they can not; almost every man, though, learns typewriting.¹⁸ Indeed the typewriter originally, was intended for

the use of the blind. Joinery is taught in the workshop. The men learn to make only readily saleable articles such as picture-frames, tea-trays, corner-cupboards, and ornamental tables. The blind makes these as well as does a seeing man and their earnings from this source are very satisfactory.

The largest number of men learn cobbling. This occupation has been little practiced in later years, until it was developed at St. Dunstan's. In the course of six or seven months, a blind man may be taught to sole and heel boots as well as can a man with sight. Men who have learned this industry find abundant work and make good wages. A blind cobbler uses special instruments: one, a tiny plane for finishing the sole, one for marking the proper distance between the nails, which are hammered in. A wooden file is used instead of a shoemaker's hammer. Beginners work upon discarded boots sent in by people having no further use for them. Men in advanced classes work at stitching machines and at the finishing-table, polishing and varnishing the boots.¹⁹ Cobblers are taught mat-making, because the monotony of mat-weaving is a good alternative for cobbling during the slack times, and, besides, constant employment is secured.

A few of the duller men learn only mat-weaving. Mats are made on a frame in the old-fashioned way. Skilled mat-makers can make a mat 12 square feet in size in a day. A strong border of heading is the usual finish for the mats. The blind have always made baskets. At St. Dunstan's, this stable industry is taught in many varieties. Men are taught to make the kind of baskets that will sell best in the locality where they expect to reside after leaving the school. Baskets are made of cane and willow; the former is much easier and lighter to handle. Often, patterns are made in colored cane. The correct color is not chosen by touch; but, by its position in the rack on the wall. It requires skill to make the large willow baskets. It calls for more cane and judgment to make the angles in a square basket than to make the round ones. No special tools are used in basketmaking, except the braille measure on which the inches and feet are marked with knots. It takes considerably less time

¹⁵Illustrated World, 28: 460.

¹⁶Report of St. Dunstan's, p. 5.

¹⁷Pamphlet: "St. Dunstan's Hostel," p. 2.

¹⁸Pamphlet: "Life at St. Dunstan's," p. 2.

¹⁹Pamphlet: "St. Dunstan's Hostel," p. 7.

to teach these trades than one would imagine.

All this is due to Sir Arthur's understanding of the situation and his capability as a superintendent. He knows that the system of using blinded instructors, the short hours of employment, the ever ready words of encouragement, and the atmosphere of determination that drives away the feeling of self-pity inspires the men to make the best of things and to learn rapidly.²⁰ Every workshop is a scene of enjoyment. Signs for the visitors read, "Keep off the floor-mats. They serve as guides for the men." If the men bump into each other in passing, they laugh and crack a joke. They are just merry schoolboys, many of them under twenty years of age.²¹

The poultry-farm lies beyond the workshops. Men are taught to distinguish birds of different breeds by touch, to manage incubators, to dress poultry for the table, and to run a poultry-farm intelligently. This work would not keep the men always busy, so, they are taught rough carpentry. Most of them can make chicken-coops, sitting-boxes, gates, and so on. The same training is given free of charge to mothers, wives, or sisters, so that they may be of further help to the blind man starting a poultry-farm.²² Captain Webber, a well-known blind poultry-expert, initiated this course, and eminent poultry experts—Mr. Edward Brown and Mr. Clem Watson—gave much of their time to class-instruction for men who make a promising start in this direction. The last few weeks of their training consists in putting their classroom theory into practice on a large poultry-farm which is located at Kings Langley.²³

Massage is a special occupation taught to men that have had suitable education in the past. Massage-training is carried out on very scientific principles. The men first take, at St. Dunstan's, a classroom course, in physiology, anatomy, and pathology, and then they are sent to the massage-school of the National Institute for the Blind, and it is a modern institution in every respect. The students visit hospitals daily and are allowed to massage patients of the Middlesex Hospital, St. Bartholomew's Hospital, and the Hempstead Hospital. The authori-

ties value this assistance. The men take the examinations of the Incorporated Society of Trained Masseurs before graduation. Then they are assigned to positions at military hospitals and common depots. Every establishment where these men have been tried out sends for more, as they are needed, and they certify that they more than hold their own with the sighted masseurs. They receive a wage of 2 pds. 10s. a week.²⁴

Men that have held commercial positions before the war learn braille, shorthand, and typewriting, so that they may again fill secretarial positions. This work is difficult to learn, still, a few of them acquire in a short time the necessary speed of 120 words a minute.

Each pupil sits at his own table and is given individual instruction. An arrangement of raised dots forms the letters for the fingers of the blind man, to follow which necessitates writing on the reverse side of the sheet from right to left, so that, when taken out, it can be read in the ordinary way. This stenography for the blind is an abbreviation of braille. A roll of paper in a machine unwinds as the keys are operated. The shorthand notes are read by passing the fingers over them and then are transcribed on the typewriter. The men who have held positions have been highly recommended, and they receive higher compensation than they did before the war. The Remington Typewriter Company has built special braille typewriters, and these have been perfected in such a manner as to accommodate men that have lost one hand.²⁵

The dropshutter system of telephone-operating is taught to those that have a keen sense of hearing and can tell by sound which drop has fallen. They become as competent as the operators that see. They must have a knowledge of braille and typewriting, in order that they may take and transmit messages. Whenever possible, men are taught to resume occupations that they left when they entered the war. All that have left St. Dunstan's are earning more money, when their earnings are added to their pensions, than they did before they were blinded. Only 15 per cent of those who entered St. Dunstan's have left it before completing a course, and their departure was because of ill

²⁰Pamphlet: "St. Dunstan's Hostel," p. 6.

²¹Pamphlet: "The Joys of Second Sight."

²²Pamphlet: "Life at St. Dunstan's."

²³Report of St. Dunstan's, p. 7.

²⁴Pamphlet: "Life at St. Dunstan's," p. 5.

²⁵Pamphlet: "St. Dunstan's Hostel," p. 4.

health or else owing to bad habits. Only 2 were dismissed for bad conduct.

The reeducated men that have again entered the world of industry are being visited regularly. They are given further financial aid when necessary and a market at a central depot is found for all their goods. This supervision or "aftercare", as it is called, is not to be of temporary duration, but, is well organized and will continue indefinitely.

The system is an elaborate one, dividing the kingdom into districts, with each district having a traveling superintendent, who visits each of his men every two or three weeks. It is an easy matter for a blind man to make a mistake and to persist in it until the wrong is observed by a visitor and corrected by an expert sent to him immediately.

The family-life of the blind man is also looked into by the "aftercare" bureau.²⁶ Thus, the men have no dread of a dark future, and they become self-supporting, self-respecting citizens, who consider their blindness as a handicap but which they hope to overcome as nearly as possible. Such is the thoroughness of Sir Arthur Pearson's methods.²⁷

The following is a quotation from *The Christian World* by the Rev. F. C. Spun: "Twice have I been to see the men at St. Dunstan's. The first visit surprised me. I went with soft tread along the gravel path as if I had been going to a hospital. A Red Cross nurse lent color to my illusion. But, upon nearing the entrance-hall, I was greeted with sounds of rollicking laughter. In twos and threes, the blinded men were moving to and fro, their leader groping for door or stepping, sometimes gaining both without a hitch, sometimes bumping into the door or into another blind man, but, always accepting the situation with cheerfulness and, even, jocularly. I came to see an institution wrapped in gloom and depression, a place where wounded men nursed their sorrow, and, lo! I found myself again at school, in the midst of boys, watching the play of youth.

That is what has happened—these men have reentered the kingdom of the child. They are beginning all over, again in a new world, as new to them as was that other world into which they grew from

babyhood into manhood. Once again they are feeling themselves about, holding on to things, to prevent themselves from being hurt, enjoying the rollick of life. A chair, a rope, a couch did duty in the first childhood. In this new childhood, various aids have been cleverly devised, to guide the uncertain steps of men newly passed into the kingdom of the blind. Upon the floors, at right angles, special paths of matting have been laid, so that a blind soldier following these never can go astray. On the terrace, the felt has been replaced by lead. Before steps and dangerous places are reached, planks of wood are laid down. The blind man recognizing the familiar sound of felt treading upon wood pauses and prepares for an ascent, a descent, a turn or an obstacle. When he walks abroad in the grounds, he guides himself by means of a rail. When his fingers encounter a knob upon the smooth rail, he knows he has reached a turn in the path. He can not go astray.²⁸

Friends of the blind are entertained at St. Dunstan's free of charge for a week at a time. Their expenses to and from London are paid. Companionship with dear ones assists the blind to renewed effort.²⁹

Through the assistance of Mr. C. E. Rose, the men are taught to play, as well as to work. Their contests consist in walking and running races and in tugs of war. They also learn to row and to swim, and they learn both well.

When rowing is out of season, they play pushball and take physical drill, and crowds of onlookers always are interested in the prize-contests. The men get a dancing-lesson once a week and have their own regular dance once a week, to which they invite a lady friend. Evenings they play dominoes, chess, draughts, and cards.³⁰ Chessboards have holes in the squares and chessmen have pegs to fit into the holes.³¹ The men eagerly participate in debates, while many of them contribute to the St. Dunstan's Review. Nearly every blind man plays a musical instrument; some receive lessons in vocal music.³² The braille system enables the blind to read printed music [easily].³³ There are two churches at St. Dunstan's: one, the church

²⁶Pamphlet: "How They Are Being Taught to Be Blind," p. 10.

²⁷Pamphlet: "Life at St. Dunstan's," p. 8.

²⁸Report of St. Dunstan's, 1917, p. 9-10.

³¹Illustrated World, 28:460.

²⁹Pamphlet: "St. Dunstan's Hostel," p. 10.

³²Pamphlet: "Joys of Second Sight," p. 3.

of England; the other, the Roman Catholic. Rev. C. M. Sharpe and Rev. L. G. Tucker preach in the Protestant church, while the Rev. Fr. Hitchcock and the Rev. Fr. Howell are the Catholic priests. Both churches are attended by the men.

The Voluntary Aid Detachment gives much time, thought, and sympathy to the men. The members walk with them, read to them, help them with their entertainments, and otherwise assist them. Physicians and dentists give their services free. Every part of the world has sent donations to this wonderful institution. The National Relief Fund and the National Institute for the Blind defray all the expenses at St. Dunstan's. Subscriptions from the public are used for extraordinary expenses, as, for example, paying fares (for visits) for relatives of the blind and their entertainment while there, paying for expensive apparatus, such as motor cars, typewriters, et cetera. Much of the public fund is used

for "aftercare" of the men that have been trained.³²

The government allows each blind soldier a pension of 27s 6d a week, and an additional 10s is allowed if the man is recommended by St. Dunstan's as being deserving. A further allowance of 5s a week for the first three children and 2s 6d for the fourth and each succeeding one is provided for. No pension is given for children conceived after the soldier is discharged. St. Dunstan's increased this last allowance to an even 5s for each child up to the age of sixteen, and is sending out an appeal to all the world for the necessary funds.³³

Sir Arthur encourages the blind to marry and to surround themselves with children, in the hope that joy will be brought into the soldier's life; and, besides, England has need of sons and daughters.³⁴

³²Report of St. Dunstan's, 1917, p. 10-13.

³³Pamphlet: "St. Dunstan's Hostel," p. 11.

³⁴London Lancet, Sept. 23, 1917, p. 480.

Diseases of the Nasopharyngeal Region in Children

By C. W. CANAN, M.D., B.S., Orkney Springs, Virginia

THE longer I practice medicine, the greater are my convictions that diseases of the nasopharyngeal region are neglected by many of the medical profession. These troubles are very common in general practice, but, unfortunately, they frequently are overlooked, treated lightly or dismissed with a few general directions. This is a very grave error and I sincerely hope that this paper may so fix the subject in the minds of the readers that more thorough work will be the result; and, first of all, that physicians no longer lead parents to believe that an afflicted child will outgrow the disorder or that the symptoms will disappear about the time of puberty. Advice of this sort will stimulate neglect of appropriate treatment and is certain to prove detrimental to the physical and mental welfare of this class of patients.

It often is necessary for the practitioner to combat the belief that operation upon adenoids and tonsils will be followed by defects in speech or imperfect development of the generative organs. This fear among the laity is wholly without foundation, but,

parents often refuse to have an operation done until firmly assured that no such evil results will follow.

The family physician should always remember that his duties are not confined to the treatment of an individual case or disease, but, that they extend to any and all conditions as they come to him.

Children under his care ought to, and should, be regarded as his wards from a medical standpoint. If there is a history of recurrent attacks of catarrh or mouth-breathing, a careful examination should be made, the trouble located, and the parents advised as to the suitable treatment. All the dangers should be made clear to them if treatment is neglected. In this way, and in that only, can the very best results be attained. Unnecessary delay or procrastination only can result in great damage to the patient.

Nasopharyngeal diseases may be viewed from two standpoints—that of the specialist and that of the general practitioner. The former is more likely to see a case late, after serious secondary complications

may have developed. On the other hand, the family-physician is more likely to be consulted in the early stages of these troubles, so that, if he is a careful physician, a great deal of suffering may be averted. It, therefore, is important that the possible evil influences caused by nasopharyngeal troubles generally and by adenoids in particular should be kept in mind, otherwise the treatment will be only palliative, rather than curative.

The Symptomatology

In discussing the conditions that affect the region in question, and the complications arising therefrom, I shall try to confine myself to their clinical aspects as nearly as possible, as I have seen and watched them in actual practice.

The symptoms vary greatly in different individuals. In one case, the brain may receive the force of the attack, in the second, the chest, while in a third, the circulatory or digestive system may receive the brunt of the attack. And so it is through a long list of conditions. Then, again, there may be a combination or complicated condition. So, also, in some cases, the relation between cause and effect is very plain, in others, it will require the most painstaking search to arrive at a clear understanding.

Much may be accomplished in the way of prophylaxis, by a correct and early diagnosis.

In nasal catarrh, there is first a condition of hyperemia, then inflammation and soreness of the mucous membranes supervene, and these, in turn, predispose to and cause chronic hypertrophy; adenoid growths, tumefaction of submental and submaxillary lymph-bodies, invasion by diphtheria and tuberculosis, and occasionally by meningitis.

Do not understand that adenoid growths are always the result of nasal catarrh, for, I have found them when there was no catarrh, but, the growths were a local manifestation of a constitutional dyscrasia. I believe that adenoids are congenital in a certain number of cases, for, I have found them in infants only a few months old.

Causes of Nasopharyngeal Troubles

As I have said before, I believe that the lymphoid tissue in the upper and middle pharynx, so often seen in children, is primary, while the catarrhal condition of the nasopharynx, particularly when attended by

a semipurulent discharge, is secondary—an effect, and not the cause.

To facilitate our study of the subject, we must keep before us the functions of the nasopharynx, namely, that it is respiratory, olfactory, to modulate the voice, to regulate the aeration of the middle ear and also of the accessory sinuses of the frontal, maxillary, ethmoidal, and sphenoidal bones. It is easy to understand why a healthy mucous membrane is essential to the proper performance of all these functions and why a diseased membrane, with a greater or less degree of stenosis, shows its evil effects in so many ways.

I have found that at least fifty percent of the people do not have normal hearing, and that, if they have it in one ear, it often is decidedly defective in the other. This often is owing to the effect of catarrh in one or both eustachian tubes. The acuteness of hearing depends upon the patency of these openings with free nasal respiration. Then we see that unobstructed nasal breathing is essential not only for the oxygenation of the blood, but, for normal hearing and to prevent catarrhal conditions of the various sinuses. There is also another condition to be reckoned with in catarrhal conditions of this region, namely, that there is always danger of bacterial or germ infection and which very materially complicates matters. The physician should always remember that the effects are not always local, but, often are remote from the seat of the trouble. Disturbances of the circulation and nervous system may result from an obstructed flow of lymph at the vault of the pharynx and base of the brain.

Deformities of the chest, with bronchial and pulmonary congestion, often are present, while in some cases recurrent attacks of catarrhal croup occur. These patients are likely to be more liable to acute and chronic bronchitis, emphysema, asthma, and bronchopneumonia.

Two years ago last spring, I was called to see the father of four children who was ill with pneumonia. The mother asked me whether I could do anything for their two little girls, who, she said, had been afflicted with catarrh from infancy. The 5-year-old child, I found, had adenoids plus a bad nasal catarrh; the 7-year-old girl had a bad case of catarrh, with a great deal of hypertrophy, and a bad case of

otitis media on the left side and great loss of hearing. This was the first time I had seen these people. I left treatment for each patient and promised to return on the third day, it being a long way across the mountains. When I made my second visit, both children were ill with pneumonia; the 5-year-old child dying later and the oldest one recovering after a protracted convalescence.

Some Complications

If you will closely examine children that have suffered from catarrh of the nasopharynx, you will find that from 30 to 40 percent of them have enlargement of the lymph-nodes at the angle of the jaw, also of the large bronchial and mediastinal lymph-nodes. This condition, I believe, is always secondary to a morbid state of the nasopharynx. I have had under my care recently a baby with whooping-cough of unusual severity. The mother said the boy was born with a cold and had had catarrh all his life. I found this child's nasal mucous membrane badly diseased, pouring out an acrid, poisonous discharge, which produces an eczematous sore on the upper lip, that often spreads out over the cheeks and up over the nasal alæ. All of us meet with children that have night-cough, that is very distressing and hard to treat successfully. This type of cough will invariably disappear when the nasopharynx is put into a healthy condition.

Children that have suffered from nasal catarrh for years have their sense of taste and smell impaired, the voice altered to a nasal character and may produce stuttering.

A diseased condition of the eyes may be reflex or it may be the result of direct extension of the process in the nasal cavity. In the majority of cases, the extension is a direct catarrhal inflammation of the nasal cavity, either acute or chronic, and adenoids often give rise to affections of the lacrimal sac and conjunctiva.

Disturbances of accommodation, strabismus, photophobia, and pupillary changes may, at times, be of reflex origin. Only recently I had a little patient who had a diseased condition of the lacrimal canal and sac. There had existed a nasal catarrh for years and mouth-breathing. I failed to cure the lacrimal trouble until I had cured the catarrh and taught the patient to breathe.

Every physician is aware that children that suffer from an abnormal condition of

nose and pharynx have scarlet-fever, diphtheria, and other acute diseases much more severely than those children that are normal. Therefore, the best preventive of microorganic invasions is, to keep the mucous membrane in a healthy state. The diseases or complications that may affect the ear are many and varied.

The worst conditions I have seen to follow catarrh and adenoids have been inflammation of the eustachian tube and invasion of the middle ear, with rupture of the drum and loss of hearing. These cases are especially benefited by treatment, not merely of the ear, but, of nose and throat as well.

Years ago, Trousseau called attention to recurring attacks of erysipelas of the face following chronic nasal and aural catarrh. These outbreaks can be avoided when the primary conditions affecting ear, nose, and throat are treated. The same I have found true for eczema and dermatitis. A close study of the lymphatic system will clearly demonstrate how microorganisms in the nose and throat can reach the meninges of the brain and produce meningitis. It is a fact, also, that the greatest number of cases of meningitis are observed between the ages of 2 and 5 years, when nasal and throat troubles are most common. I believe that these facts explain the etiology of many heretofore obscure cases of inflammation of the brain and meninges.

However, as I have mentioned before, there is a different mode of infection than that through the eustachian tube to the middle ear and thence to the cranial cavity. As a result, thrombosis and sinus-pyemia of the brain and membranes, with or without abscess, are not infrequent.

Changes of the Facial Contour

The change in the contour of the face, resulting from the long-continued mouth-breathing, is characteristic and admits of a ready explanation. The dropping of the lower jaw, owing to a functional loss of tone in the muscles, adds to the length of the face—the latter appearing longer, because of the deficient development of the superior maxilla.

Also, the nasopharyngeal obstruction interferes with the proper ventilation of the accessory sinuses, or air-chambers, as a result of which the blood supply is modified, hence, normal growth of bone does

not take place and, so, expansion is retarded.

The blood becomes poor and malnutrition is present because of the digestive disturbance. All this leaves an imprint upon the face and gives that drawn appearance of the eyes and mouth.

The facial muscles are poorly developed, and the pinched nose or distended alae add to the deformity. These changes, taken in connection with the mental state, give rise to the characteristic physiognomy.

Mouth-breathing, because of obstruction in nose and nasopharynx, produces a high arch, with narrowing of the transverse measurement of the jaw, thus presenting a pointed appearance in front, with resulting contraction of the alveolar process. This crowding and even rotation of the teeth on their axis—as a result of the absence of the support of the tongue and of an increased atmospheric pressure upon the roof of the mouth, in consequence of the buccal breathing—explains the deformity.

We see some cases in which there is a strong tendency to stomatitis and gingivitis that are very persistent until the growths are removed and the nose and throat put in a healthy condition.

Nasopharyngeal Troubles and the Nervous System

Before closing this discussion, I must call attention to the effect produced upon

the nervous system by these nasal and throat conditions. Many of the children thus afflicted are inattentive, backward and dull and get on in their studies very badly. In some cases, there is pronounced nervous irritability. A low grade of headache often is a feature in children that have suffered from nasal obstruction for a long time. I have found that these children are more liable to have night-terrors, or "horrors," as it is sometimes called; are subject to walking in the sleep, to morbid dreams, melancholia, and many other evidences of disturbed cerebral function.

I could fill pages with naming conditions that arise from nasal obstruction, many of them grave, but, must come to a close, except to add a word in reference to prophylaxis.

Some writer has said that there is more danger in a dirty nose than in an unwashed face. This certainly is true, and every mother and nurse should be taught how to cleanse the baby's nose, because very few of them can do it properly and thoroughly. Preventive medicine has done much to alleviate human suffering in many directions, and it will be found just as efficacious in this condition. Thus, every physician should do his best toward this end and so prevent much suffering, as well as contribute toward the rise of a sturdier stock of human beings.

Dermatological Notes—IV.

The Treatment of Eczema

By A. V. RAVOGLI, M. D., Cincinnati, Ohio

IN handling the subject of the treatment of eczema, we must approach it from different angles. The first question is, Can eczema be cured with vaccines? Second, Can eczema be cured with internal remedies? Third, Has the hygiene a great influence in the recovery? Fourth, Must local applications be used?

The Vaccine-Therapy

Vaccine treatment for eczema seems to be the most appropriate. We have stated that pus-producing germs are the cause of

the disease, hence, their vaccine ought to be able to produce artificial immunity or at least increase resistance of the organism to their infecting-power. Yet, according to Ravitch,¹ the vaccine-therapy in eczema has failed to give any good results. Many authors report good results in chronic cases of furunculosis, but, for eczema, we find no great encouragement. Bacterial vaccines may be employed in any infection

¹ Ravitch, L. M., *Jour. Amer. Med. Assn.*, 1915, No. 15.

that has a tendency to a certain degree of chronicity. As eczema seems to be a staphylococcic infection, vaccine obtained from their culture must be of great value.

Unfortunately, we do not know much about what vaccination can accomplish in bacterial infections. It seems that the auto-genous vaccines ought to be preferred to stock-vaccine. In our experience, we have used the staphylococcic vaccine in two cases of sycosis barbæ of coccogenic origin, which is of the same nature as eczema. After the first injection, some fever reaction occurred and in two or three days the pustules healed up. The improvement, however, was only temporary, as pustules were formed again. Injections of vaccine-virus were repeated, without reaction and with very feeble action on the pustules. Gradually we lost confidence in the vaccine-therapy and returned to our old treatment.

In a general way, we must say that vaccine-therapy may do good and should be tried. Doctor Towle and Doctor Gilchrist have used vaccine preparations incorporated in lanolin, to be applied externally on the affected locality, and both claim good results. There still is required a great deal of study on the use of the vaccines, and also experience and knowledge of the opsonic power of the leukocytes, in order to advise intelligently the continuance or the discontinuance of the vaccine-treatment.

Smallpox-Vaccination of Eczematous Children

It will be of some interest to discuss the popular opposition to the inoculation of the cowpox vaccine in children affected with eczema. Not infrequently mothers complain that their children, to continue the school course, must be vaccinated, but, they are suffering from eczema. They go to the physician, asking if it is right to let the child be vaccinated. This is the result of experience, and the opposition to vaccination in children affected with the eczema is well taken. Obmann reported two cases of generalized vaccine eruption in children suffering with chronic eczema. Goepfert recommended not to inoculate children suffering from eczema. He found general furunculosis resulting from the vaccination, and that this was transmitted to other members of the family. We have no personal experience. We have seen many cases of bullous eruptions following vaccinations, and it is very probable that

some have been produced by disregarding eczema when cowpox was inoculated.

The Internal Treatment

The second question is in reference to internal medication. It has been discussed for years. The laymen expect a great deal from blood purifiers, especially when taken in the spring of the year. Every kind of herbs and roots having diuretic or purgative properties has been administered in infusion or decoction, without effecting real improvement in the condition of the disease. If any does benefit, it can be considered imaginary—it having relieved the mental strain, with the promise of better blood and, in consequence, healing of the disease.

We have no remedy with specific action for eczema. Yet, we must use internal remedies, to obviate internal conditions, which while being no direct cause, yet, may aggravate the skin eruption. In our practice, we often find our patients troubled with constipation, with gastrointestinal catarrh, and imperfect digestion, and we derive great benefit from the use of small doses of calomel, together with sodium bicarbonate. Especially in infants suffering from enterocolitis, 1-10 grain of calomel with 1 to 3 grains of sodium bicarbonate, given two or three times a day for eight to ten days, gives very satisfactory results. Mineral waters owing their efficiency to sulphate of magnesium and of sodium are good and helpful. In cases of chronic gastric catarrh, the alkaline mineral waters of the Vichy type give good results. We do not neglect bitter remedies, like gentian and nux vomica, in cases of loss of appetite and difficult digestion. In case of anemia and of rundown system, bitter remedies can be associated with ferruginous preparations, such as tincture of iron, to build up the system and improve the nutrition. In children of the scrofulous habit, we are not opposed to the administration of codliver oil. Arsenic, as Fowler solution or as sodium cacodylate, often has been used in eczema, although, in our experience, without perceptible results. If eczema, however, is secondary, having a lichenoid eruption as its base, then Fowler's solution may prove of some benefit. In some of our cases, the use of arsenic has made eczema much worse—so much so that it was necessary to discontinue it.

In speaking of internal medication, we repeat that no internal remedy will cure

eczema; still, it will help to improve the system of the patient, by removing defects of nutrition. The organism will be more able to produce antibodies, to neutralize the toxic product of the pus-germs, and to render the skin less susceptible to their attacks.

Hygienic Management

The patient having eczema has to follow hygienic rules. Of course, everybody understands that, in order to cure a disease, the presumptive causes have to be removed. The surroundings have to be changed, the diet must be taken into consideration, and be corrected when faulty. We have seen some patients afflicted with eczema dirty, filthy, full of crusts, and saying that the family-doctor had ordered them not to apply any water under any circumstances. It is hard to trace the origin of such nonsense, or, better, prejudice. When we maintain that the origin of eczema is from pus-producing germs, it is clear that leaving dirty clothes with dried purulent matter, together with the impurities from the atmosphere, from the natural perspiration, from sebaceous matter, it must make a mixture capable to produce eczema in a healthy skin. In an acute and subacute eczema, the application of soap and water could not be tolerated, but the area can be made perfectly clean with a mild solution of borax. In chronic eczema, the application of soap, especially green soap (or tincture of soap), is found very beneficial, because it dissolves the epidermic scales adherent to the surface.

Change of air and change of surroundings. Especially in bathing-places having mineral waters rich in sulphur, in which the patient can take a bath, he may derive some benefit. White Sulphur Springs, Meagher County, Montana, and White Sulphur Springs (hot), of Iowa and Louisiana, can be recommended. Hot Springs, Bath County, Virginia, have a great reputation. They are easily accessible, with splendid hotel accommodation. At the distance of only three miles, there are the Healing Springs. The place is located in the heart of the Appalachian Mountains, and the waters are considered of great medicinal value, being nearly equal to similar waters of European spas. The principal ingredients are magnesia, sulphur, soda, and alum. The bathhouse at Hot Springs is a magnificent structure and fitted with

all modern requisites for an institution of this kind. The waters resemble a great deal those of Hot Springs, Arkansas, and those of Aix-les Bains in France. The water is limpid, has a styptic taste, and an odor of sulphureted hydrogen. Immersion in the bath gives a sense of pleasant repose and the skin gets soft and smooth as if annointed with a delicate ointment. This unctuous quality may be the result of the presence of silicates and monosulphuret of sodium, besides some organic matters. In our experience, some stubborn cases of chronic squamous eczema have been greatly benefited by these waters.

The regulation of diet for us means, to correct irregularities in eating and drinking, and not, to starve the patients without any reason. Of course, if a patient is a great meat-eater, anyone with sense will advise him to cut down the meat to only once a day. His dietary will contain vegetables of every kind. Some women nearly live on candies—thick chocolate candies—and then complain of sour stomach. This must be forbidden and they must be placed under a regular mixed diet. Excessive smokers and tobacco-chewers must modify their habit. In our experience, tobacco may be a concomitant cause of eczema. Tobacco makes the individual nervous, aggravates the itching sensation, and compels the patient to scratch, which makes the eczema much worse. In the same way, the use of alcoholics must be stopped. If the patient is used to some light beer or light wine with his dinner, we do not object to letting him have this pleasure.

Change of air, some rest, leaving ordinary occupations, especially when compelled to handle chemicals of irritating qualities, quitting worrying, all may have a good influence and help to bring recovery in obstinate cases of eczema. Local treatment is of the greatest importance.

We can say that many cases of eczema are aggravated from the indiscriminate use of inappropriate applications advised by laymen, by newspaper advertisements, and also by physicians not very familiar with skin troubles. Any and every application recommended is used on the inflamed skin without discrimination of the type, of the stage of eczema, or of the anatomical region of the body affected. Applications that are valuable in a case of erythematous eczema have no effect in a case of squam-

ous eczema; and *vice versa*, what it beneficial in a case of chronic eczema cannot be used in the acute stage of the disease. Many applications useful on parts of the body without hair can not be used on the scalp or beard without caking the hair together. In this instance, it is well to discuss whether in the treatment of eczema the hairs should be cut or shaved off. In our experience, cutting of the hair in a woman with a fine head of hair is a great mistake and must be objected to. Remedies can be applied on the scalp very easily without removing the hair. We can effect recovery of eczema and save the hair, which it will take years to regain its former length. In eczema of the scalp, the secretion of the eczema, the epidermic scales, and the impurities all together will form thick crusts that will cake the hair together. Under these crusts, head-lice are soon lodged, which even the greatest attention can not prevent. Any remedy in the form of an ointment applied on that scalp will increase the irritation and the dirt, and very likely will make the eczema much more angry.

The most important thing to be done is, to clean the scalp. This is easily done by using a mixture of kerosene and olive-oil in equal parts, soaking the whole scalp with it at bedtime, and leaving the oil on until the following morning. The oil is merely rubbed off with a flannel rag; the crusts are removed as best they can by combing the hair gently. This application is repeated the following night, when, the day after, the scalp is thoroughly washed with tincture of green soap and dried. When the crusts are removed and the parasites destroyed, then we can go on and apply remedies in order to cure the eczema.

In a general way, we must warn that it is not right to say that this or that preparation is useful in eczema, if we do not give due consideration to the anatomical region involved, and the variety and the stage of eczema, especially as to whether acute or chronic. The desired action of the remedies is secured, also, by the way they are applied; some salves, for instance, being smeared over, while others are spread on gauze and applied on the affected surface. Upon the method of applying the remedies depends the result, and many times from a remedy known for its efficacy, on account of the improper way of its appli-

cation, we may see the spreading of an eczema.

We have already mentioned that eczema tends to appear of different form in certain particular regions. Thus, for instance, in adults, the face is the favorite locality for the erythematous variety, the hands and feet for the squamous and fissured variety, the legs and genitals for the chronic infiltrated moist variety. It is, however, to be remembered that, whatever anatomical region is affected by eczema, the disease is always the same, as is also the treatment, with only the variation in the application and selection of the remedies.

Some Specific Directions

In a general way, an acute eczema is an inflammatory affection and has to be treated with appropriate remedies. In some cases, the use of dusting-powders (rice-starch, talc, etc.) gives excellent results. On the face, neck, scrotum, crurogenital fossa, perianal regions, et cetera, in an acute eczema, the best application is, an astringent application (as a 2-percent solution of subacetate of aluminum, or biborate of sodium, or subacetate of lead and aluminum, or Burow's solution), applied for half an hour two or three times a day on a linen compress. After the application, the surface is dried and then covered with a dusting-powder. At this stage of the eczema, the skin does not tolerate any greasy application, and every time that a salve is spread on the skin we are likely to see a relapse of the eczema.

In cases of acute eczema of the scalp, when much exudation is present, the hairs are all glued together. Here, we find very useful a mild solution of carbolic acid, as in this formula:

Acidi carbolici	dr. 1
Glycerini	dr. 1
Aque rose	ozs. 3
Alcoholis	ozs. 3

This solution relieves the itching and also diminishes the exudation.

When we need some remedy to diminish the seborrheic secretion to effect the keratinization of the epithelial cells, we can make a very soft salve of white vaseline, 1 ounce, with 15 grains of resorcin and 10 grains of salicylic acid. It is necessary to point out, never to use resorcin when oxide of zinc has been used, for, they form a mixture exceedingly irritant and there

is danger of the eczema getting much more angry. In some cases, a lotion of ichthyol, applied with a brush between the hair on the scalp, helps the cornification of the epidermic cells, diminishes the inflammation, and, after a few applications, we see the skin returning to its normal condition. This is my formula:

Ichthyolis	drs.	2
Olei amygdali dulcis.....	drs.	4
Liquoris calcis	drs.	4
Aquæ rosæ	drs.	12
Glycerini	drs.	12

Directions: Shake well and apply with camel's hair brush.

This preparation has given us very good results in some cases of eczema rubrum of the feet and legs. In these cases, it is better to saturate with it strips of lint and place them around the limbs and then bind them up with a bandage. This dressing can be left on for twenty-four hours, thus giving the epidermic cells a chance to cornify and begin their work of restoration of the epidermis. When the secretion is so abundant as to wet the bandage, then it is better to have it changed twice in the twenty-four hours.

In an acute eczema of the face, of the scrotum, of the genitals with abundant exudation, the wet applications of subacetate of aluminum are good; but, they can not be continued all the time. The dusting-powders soon cake, and then the patient feels uncomfortable. In these cases, we apply, with a camel's hair brush, a liniment of the following formula:

Zinci carbonatis albi.....	drs.	3
Zinci oxidi	drs.	3
Glycerini	ozs.	2
Aquæ rosæ	ozs.	2

The bottle must be well shaken, the lotion poured into a saucer, and applied with a brush. It forms a white layer like a varnish, protecting the excoriated papillæ and giving time for the epidermic cells to be restored. This mixture may be applied, also, on gauze, in cases of excessive exudation. It is very soothing and in acute eczema of the face and of the scalp in children has always been found beneficial.

In cases of chronic eczema, the use of salves should be recommended. The surface always must be washed with a solution of biborate of sodium, then bathed with our solution of carbolic acid (see above), to stop the itching, then is covered with the salve. Sulphur salve gives splen-

did results in some cases. We use a modification of the Lassar's paste, namely:

Florum sulphuris	dr.	1
Zinci oxidi	dr.	1
Amyli	grs.	30
Acidi salicylici	grs.	10
Vaselini	oz.	1

This salve is smeared over the eczemic surface and may be covered with a piece of gauze or lint. In children, especially for the face, it forms a layer, and it is not necessary to have it covered with a bandage. On the arms and legs, it is protected with a bandage, or, if the lesion is on the body, the patient may use very thin muslin underwear, which will keep the salve on. This sulphur salve, although of great value, can not be continued for the entire duration of the treatment; hence, after a certain number of applications, we change to the benzoated oxide of zinc ointment, widely known as Wilson's ointment. Formula:

Acidi benzoici	Gm.	5
Vaselini	Gm.	75
Dissolve by gentle heat then add		
Zinci oxidi	Gm.	20

This forms a creamy ointment and can be applied on gauze or smeared over the affected surface. It is soothing and protects the excoriated surfaces, giving to the epidermic layer a chance to be formed again. In some cases in which there is some infiltration or when especially near the mucous membranes, 10 or 20 grains of calomel in 1 ounce of the Wilson ointment gives beneficial results.

The old 2-percent yellow-oxide of mercury in vaseline ointment is to be recommended when dealing with eczema of the nostrils, the lips, the anus, and other localities.

In cases of impetiginous eczema of the scalp, the beard, and in children, a salve with the white precipitate of mercury is always preferable. Example:

Hydrargyri precipitati albi.....	grs.	15
Acidi carbolici	gtt.	10
Bismuthi subcarbonatis	grs.	30
Zinci oxidi	grs.	30
Vaselini albi	oz.	1

In cases of chronic eczema of the palms, soles, and fingers, with thick epidermic scales, and much more so when the presence of the trichophyton is suspected, the old Wilkinson ointment gives splendid results. Formula:

Florum sulphuris	drs.	2
Saponis viridis	drs.	2
Olei cadini	dr.	1

Terrae albae grs. 30
 Vascelini flavi oz. 1

With this salve, we effect softening of the epidermic scales, which are soon removed. In these cases, washing with green soap helps very much, the alkaline soap of potassa penetrates between the necrotized epidermis, dissolves it, and cleanses. This same treatment can be used in cases of eczema of the fingers and toe-nails, in cases of paronychia.

In cases of eczema of the nail-bed, with paronychia, the application of ichthyol combined with the old diachylon ointment has proved useful. Formula:

Ichthyolis dr. 1
 Unguenti diachylon hebrae.....oz. 1

This is spread on gauze and applied.

It is necessary to mention that obstinate cases of paronychia are maintained by ingrown toe-nails. In this case, the first thing to do is, to pull out the part of the nail which, like a foreign body, maintains the suppuration.

The application of mild caustics is found necessary to heal up rhagades and fissures, which, left to themselves, will never heal up. We use, for the face, a 3-percent solution of trichloracetic acid (which has nearly the same action as nitrate of silver) for touching up rhagades on the face, lips, et cetera, thus avoiding the stain produced by nitrate of silver. The latter, however, is very useful for the same purpose in places where the stain is not seen.

The grandest remedy of all in chronic eczema is, the tincture of iodine, which is applied in the same way as the surgeons do for sterilizing the skin before operating. For the first applications, we dilute the ordinary tincture of iodine with alcohol. When the skin stands its action, then we use it somewhat more concentrated. After the application of the tincture of iodine the surface is covered with benzoated ointment of zinc. This diminishes the itching, removes the layers of necrotized epidermis and removes the pus-germs, and in a short time the surface begins to heal up.

In cases of eczema of the nostrils, which always is caused by nasal catarrh, the nares must be irrigated and treatment applied. Sometimes folliculitis of the hair of the nose is most obstinate and thus maintains the eczema. In these cases epilation is a necessity—pulling out the infected hair,

then touching up with 3- to 5-percent nitrate of silver solution, and then anointing the affected parts with yellow oxide of mercury salve. This is the only way to obtain a cure.

Many have spoken of the value of exposing the eczematous parts to the x-rays. We have used the x-rays in eczema, but with only doubtful results. In some cases, it seems to do good for a short time, then the eczema comes back with more severe symptoms. In our opinion, it is better to avoid x-raying, which sometimes may be more injurious than beneficial.

The use of medicated soaps on a healthy skin is to be discouraged. Some antiseptic soaps are very irritating, and, by their use, dermatitis and consequent eczema may be produced. We have used medicated soaps quite extensively, and we can say that any ordinary pure soap is to be advised as best to use. Some years ago, tar was greatly praised to finish the treatment of eczema. Tar is inconvenient to the patient, on account of the pungent odor, it soils the linen, the dressing, while sometimes after having patiently brought a case of eczema near to recovery, the application of tar has caused a severe relapse. A mild (2-percent) carbolic-acid lotion takes the place of tar with more safety and comfort of the patient.

Of course, during the treatment and afterward, bandages and pads have to be used to support varicose veins, to prevent swelling of the legs. The best bandages are those of ordinary gauze or muslin, the once so much praised rubber bandages should be abandoned as useless and in many instances injurious.

In the foregoing we have, as briefly as possible, outlined the principles of the treatment of eczema. With the few remedies mentioned, we obtain the recovery of eczema. One point, though, we wish to emphasize before closing, namely: it is not of any use to jump from one remedy to another or to order remedies at haphazard from the alphabetical list of remedies named in the textbooks. In some cases they may be useful, but, in general, will make the disease worse. Finally, the patient must be enjoined to follow the directions in the strictest manner if we are to effect recovery from this stubborn skin disease.

What Others are Doing

TREATMENT OF MERCURIC CHLORIDE POISONING

A most interesting paper upon the treatment of mercuric chloride poisoning was read by Dr. Bernard Fantus at the last meeting of the Illinois State Medical Society. The paper is published in *The Illinois Medical Journal* for September, 1918. Doctor Fantus has conducted an exhaustive series of experiments with virtually all suggested antidotes for this poison. He has come to the conclusion that the best of these is that suggested by Dr. Thomas A. Carter, first reported in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for April, 1914. This consists of a combination of sodium phosphite, 10 parts, with sodium acetate, 6.6 parts. The sodium phosphite (note carefully, this is not sodium phosphate) alone is of no value, and a large excess of the sodium acetate seems to destroy the antidotal value of the phosphite. The combination, which was put out in tablet form by The Abbott Laboratories, must be nicely balanced, and when so compounded it produces remarkable results, which have been verified by carefully controlled animal experimentation by Doctor Fantus. When the Carter antidote is not available, the next best remedy is a combination of sodium hypophosphite, 1 part, hydrogen peroxide solution $2\frac{1}{2}$ parts, and water 10 parts, this being devised by Doctor Fantus.

If the amount of poison is known, ten times as much of the phosphite should be given as poison was taken, and the dose should be repeated every four to eight hours for several days, in order to reduce to calomel any mercury which may still remain in the stomach. Further, lavage with a dilute solution of the antidote is advised.

In addition, to neutralize as far as possible the swelling and subsequent destruction of the kidney cells, Doctor Fantus advises the intravenous use of Fischer's alkaline solution (sodium carbonate, 10

Grams, sodium chloride, 15 Grams, to 1000 milliliters of water). Of this, 1000 to 1500 mls are administered, according to the condition of the heart, the endeavor being through this method to make the patient void large quantities of urine and to keep the urine alkaline.

INFANT MORTALITY AMONG THE COLORED POPULATION

A study of the Philadelphia vital statistics of the past two years showed the infant mortality rate for Philadelphia to have been 100.8 per living birth in 1916, while in 1917 the rate had increased to 107.6.

Writing in *The Monthly Bulletin* of the Department of Public Health and Charities of the city of Philadelphia, for September, Dr. Harriet L. Hartley says that there were 2,126 living colored births in 1916 and 345 deaths of babies under one year of age; thus making a colored infant-mortality rate of 162.2 per thousand living births. In 1917, there was an increase of 71 in the number of deaths and an increase of only 420 living births, so that the colored infant mortality for that year was 163.7 for each one thousand living births.

A survey of the colored-infant deaths in 1916 disclosed that 80 of the 345 deaths recorded had occurred in hospitals.

As regards the causes of deaths of these 345 infants, it was found that the conditions classed under the so-called congenital malformations constituted 34 percent of the deaths. The respiratory diseases and the diseases of the digestive system were responsible for 24 percent of the deaths in each class. The preponderance of congenital malformations, it is believed, is accounted for, probably—at least in part—by the general employment of the colored females, in gainful occupations. Many of these women had worked throughout their entire gestation, and only in 10 of the mothers it was found that they had been

able to limit their work to home duties during pregnancy and after.

A further reason for the relatively great infant mortality among the colored population is probably connected with the fact that not only young girls but older women are employed during the daytime, as also the prospective mothers, so that home care of the Negro babies is very unsatisfactory. Moreover, institutional care also is meager, there being only three good colored day-nurseries in Philadelphia and only two licensed baby-boardinghouses, while a great many colored women take babies in board in unhygienic surroundings.

It may fairly be assumed that these conditions as discovered in Philadelphia are typical for those births in most of the cities where there are Negro quarters, and it would be well if health departments and physicians could cooperate in improving the housing-conditions of the colored population, and especially the conditions under which the colored babies are raised.

THE PREVENTION OF BLINDNESS

The Illinois Society for the Prevention of Blindness recently prosecuted two midwives in the Municipal Court, Chicago, for failure to observe the requirements of the act for the prevention of blindness from ophthalmia neonatorum. Both were convicted, and the minimum fine of \$10 was imposed in each case, as it was their first offense.

The act for the prevention of blindness in babies requires that all physicians, nurses and midwives who assist any woman at childbirth, or at any time within two weeks after childbirth, shall report within six hours to the local health authorities any diseased condition of the eyes of an infant. Seventeen schools for the blind throughout the country report that 25 percent of their blindness is due to failure to secure prompt and effective treatment for the cases of ophthalmia neonatorum. This does not include the many additional cases of partial impairment of vision.

A vigorous prosecution of midwives and doctors who do not observe the requirements of the law in the care of the eyes of the new born has been begun and is to be pushed vigorously. In this manner, it may confidently be expected, many preventable cases of blindness will be warded

off. The provisions of the law deserve the fullest support on the part of physicians who should do their utmost to aid in its enforcement.

A MASSAGE-SCHOOL OPENED IN TORONTO

From *The Trained Nurse* (July), we learn that women from all parts of Canada have answered the call for masseurs and enrolled in the big training school opened by the Military Hospitals Commission at Hart House, Toronto, for the purpose of qualifying women as trained workers.

The first class on the opening day numbered 82, and the entrantes varied from young college-girls to mature women of 40, all eager to make themselves proficient in the work, that they might help mend the soldiers that have returned incapacitated and needing such treatment to make them fit again.

The course is under the direction of Sergeant-Majors Kendall and Holmes, who have been carrying on a similar course in Whitby Convalescent Hospital and Barraca Hall since February, and who have turned out 52 trained masseurs in their first class, 17 of whom were returned soldiers.

In the Hart House school, in addition to training in massage, the young women will be given instructions in orthopedic movements and medical electricity, and in a few months' time, it is hoped, a course in therapeutics will be added.

The graduates will be sent to the various military hospitals throughout the country, to treat cases of nerve injury, paralysis of the muscles, and stiffened joints, which, by means of massage and such treatment as the course includes, have been cured in scores of cases at first thought to be hopeless.

TREATMENT OF EMPYEMA BY THE CARREL-DAKIN METHOD

In the war demonstration hospital at the Rockefeller Institute for Medical Research, a number of cases of empyema following pneumonia have been treated which were of a peculiar type and presented new problems. All these patients were treated by the Carrel-Dakin method and a preliminary report is presented by Major

George A. S. Stewart in *The Medical Record* for August 10.

In some of the cases, operation was done as early as the third day after the onset of the pneumonia; while the longest period elapsing before operation was 120 days. The operations always were performed under local anesthesia with novocaine [Procaine.—Ed.] in a solution of 1 to 400.

In the early cases, the pleural cavity was not flushed out at operation. Three to five Carrel perforated tubes were placed in the cavity extending to all points, and two large short tubes inserted in order to have a free outflow of secretion and chlorinated material. With the later cases, the pleural cavity was flushed with Dakin solution at the time of operation, the large tubes were omitted and four Carrel tubes stiffened with fine silver wire were placed, endeavoring to reach all parts of the cavity. Compresses wet with Dakin solution replaced the large tubes originally used, in order to prevent a too rapid interchange of air. After placing the tubes and compresses, x-ray examination showed that the tubes reached all parts of the cavity.

In the early cases, instillations of 30 to 60 mils (Cc.) of 0.2-percent sodium hypochlorite solution were given every two hours for forty-eight hours, and, as no contraindications arose in the use of this solution, the strength was increased to 0.5-percent sodium hypochlorite, or full-strength Dakin solution. In the later cases, instillations were given every hour during the day and every two hours during the night, the amount being increased to from 80 to 100 mils of Dakin solution. This was done so as to follow more closely the necessary principles of time, concentration, and contact in the use of an antiseptic.

Dressings are made daily. A smear from the inside of the pleural cavity is taken to be examined microscopically, the cavity is flushed out, the individual tubes are tested, and fresh tubes inserted when necessary. Compresses wet with Dakin solution are then placed in the external wound as at operation, the skin is protected with vaseline compresses or zinc oxide ointment, and a cotton pad and chest binder applied. The external dressings are changed by the nurse when necessary.

In the first cases, closure took place spontaneously in from three to seven

weeks, no attempt being made to suture the wounds. In the later cases, however, secondary closure was made with suture when sterilization was obtained as shown by the bacteriological curve, and in some cases by culture as well. Cultures taken at the time of dressing have been found sterile at the end of five to nine days. In this way, it was possible to terminate cases in from five to twelve days or more, the average time being about fourteen days. Primary union was obtained in about 70 percent of the cases. When secondary sterilization was necessary, this was readily obtained in all cases in a week or less, and complete closure was the final result. The secondary infections were always found to be of low virulence.

After operation, the patients were comfortable and were, in general, free from the toxic symptoms present in most empyema cases. The secretions have been small in amount and free from odor. The temperature has dropped, as a rule, after operation, and, in a few cases where it has remained elevated this has been due to the pneumonic process which was still active, or else to complications, since practically all of the cases were operated upon before a crisis or lysis.

SCOPOLAMINE-MORPHINE WITH LOCAL ANESTHESIA IN THE RADICAL CURE OF HERNIA

That local anesthesia is peculiarly suitable for the performance of a radical cure of inguinal hernia, has been generally accepted; the use of scopolamine and morphine in combination with it, though, is employed less frequently; in some communities, general anesthesia still seems to be preferred.

In *The Boston Medical and Surgical Journal* for September 5, Dr. John H. Cunningham, Jr., relates that, during the past six years he has used combined local and scopolamine-morphine anesthesia in over 500 cases of inguinal hernia and has come to regard it as the method of choice. Properly performed, local anesthesia allows the same technical steps of the operation to be carried out as when a general anesthetic is employed, and the combined use of scopolamine and morphine eliminates all consciousness during the performance of the operation, which is always preferable, both from the viewpoint of the patient and

the operator. Those that have used local anesthesia in the operation for inguinal hernia will agree, that the infiltration of the tissues beneath the fascia of the external oblique muscle simplifies the technical steps of the operation, especially in finding the sac. Moreover, following the completion of the operation, the united tissues are not subjected to the strain which must accompany vomiting, when it occurs after ether anesthesia, or the cough sometimes resulting from ether inhalation. When scopolamine and morphine are administered, the patient loses consciousness, while in bed, in a most pleasant manner, and the apprehension of taking the anesthetic, or going to the etherizing or operating room is eliminated, which is no small matter to the average patient.

The use of this combined method of anesthesia has permitted the removal of the appendix in over 80 percent of the cases of right inguinal hernia, and the operation of gastroenterostomy, gastrotomy, cholecystostomy, cholecystectomy, appendectomy, suprapubic and perineal prostatectomy, internal and external urethrotomy, hemorrhoids, and fistulae, goiter, umbilical and ventral herniae, and amputations have been successfully carried out in patients who for one reason or another, were not considered suitable subjects for a general anesthetic. Two patients, subjected to thigh amputation for arteriosclerotic gangrene, had no local anesthesia, except to the nerve trunk, and it is the writer's belief that by employing scopolamine and morphine all local operations may be performed with a much smaller amount of the local anesthetic. While no untoward symptoms have occurred in the writer's cases, other than a mild muttering delirium in some, lasting for several hours, scopolamine and morphine in too large doses is said to have a somewhat depressing action on respiration. The bad results from the use of scopolamine and morphine have been, the depressant influence on respiration, occasionally to the point of asphyxiation. When it has occurred it must be due to a rare idiosyncrasy of the patient or to enormous doses of the drug, as the writer has employed it in over six hundred cases with encountering it. Physiologically, scopolamine acts on the cerebrum, inducing sleep. It has a depressant action on the spinal cord,

but, is not an analgesic. The pulse rate is lowered and respiration somewhat depressed. The pupils are dilated; the skin becomes moist, and the throat and mouth dry. The effect of the combination of scopolamine and morphine lasts 6 to 8 hours and has the advantage of not requiring post-operative injection of morphine, as so frequently occurs following ether anesthesia, and the patient has no ill effects in the post-operative recovery.

THE TECHNIC OF SCOPOLAMINE-MORPHINE ANESTHESIA IN RADICAL OPERATION FOR HERNIA

In the preceding abstract, mention is made of the preference given by Dr. John H. Cunningham (*loc. cit.*) to the combinations of scopolamine-morphine with local anesthesia in operation for the radical cure of hernia. The technic as he employs it, in the performance of this and other operations, is of interest. It is as follows: Two hours prior to the operation, from 1-120 gr. scopolamine and 1-6 gr. morphine; to 1-250 gr. scopolamine and 1-8 gr. morphine, according to the physical condition of the patient, is administered. One hour later, the memory is tested by simple questioning and the suitable dose for the next administration judged, and increased or decreased over the first dose, as conditions indicate. In the average adult, a second dose of 1-120 gr. scopolamine and 1-6 gr. morphine will be required, as little or no effect may be expected from the first dose. About one hour later, just before taking the patient to the operating room, the memory is again tested, and if absent no more drugs are given. This state of the patient is the most common. Less commonly, however, more of the hypnotic drug will be required. When this is so, scopolamine 1-200 or 1-250 grain, but without morphine, is given. After the patient arrives in the operating room, quiet should be observed, and if the light is bright a towel should be placed over the eyes. The legs and arms should be confined as for any local operation, to prevent voluntary or involuntary motions.

The solutions employed for the local anesthesia have been novocaine [Procaine—Ed.], 1-4 to 1 percent with 5 drops of adrenalin to the ounce; also, apothesine,

1 percent, or, quinine and urea; and, when none of these solutions could be obtained, cocaine, 1-4 percent. When Procaine was obtainable, it has been the solution of choice, but, apothesine has proven quite satisfactory. Quinine and urea seems the least valuable, and cocaine is to be avoided if possible.

The local anesthetic is used for the purpose of infiltrating the skin in accordance with the rules governing this method and these need not be repeated here.

THOSE UNRELIABLE GALENICALS

Some years ago, Dr. Henry Beates, Jr., (*Med. Rec.*, Aug 21, 1918) undertook a study of the galenicals by subjecting himself to severe and thorough physiological experimentation with several specimens or groups of tinctures. Thus, five specimens of tincture of aconite were obtained from five different reputable pharmacists and the same was done with tinctures of belladonna, of nux vomica, of strophanthus and digitalis. The infusion of digitalis also was investigated. This study was followed with a similar investigation with the general active principles of these drugs respectively.

The author lays emphasis on the fact that, in nature, the crude drug possesses active principles in vastly varying percentage proportions, and, hence, it must follow that the galenicals prepared therefrom must be characterized by the same variations of therapeutic power, with the qualifying difference, however, that these several principles themselves differ in solubility in the menstruum employed in manufacture.

Not infrequently they are also associated with other active principles in such proportions as seriously to interfere with the administration of a sufficient quantity of galenicals to obtain that special effect for which it is desired.

On testing the physiological activity of these galenicals by taking the conventionally adopted dose and repeating it at 40-minute intervals, the experimenter was surprised to discover that, as physiological effects failed to be secured and the doses therefore were carefully increased, quantities necessary to obtain positive results had to be taken that, prior to the experiments, would have been regarded as toxic,

if, indeed, not lethal. Thus, tincture of aconite root varied from 4 to 5 of the conventional two to five-minim doses, to as many half-teaspoonful or 30-minim doses, before the characteristic slowing of the pulse, respiratory oppression, gentle diaphoresis, numbness or tingling of the peripheral sensory fibers, and the somnifacient effects were obtained. The local sensory disturbances from contact with the lips and tongue were caused before these were experienced in the extremities. Tincture of nux vomica varied from the conventional 15 to 20-minim doses to two teaspoonfuls hourly or every 40 minutes for 4 or 5 doses, before the stimulation of the motor columns of the cord and the tension of the flexors of the legs were caused. Tincture of belladonna was the least variable, and conventional doses repeated, however, 3 or 4 times, were necessary to effect dryness of mouth, flushed face, augmented pulse rate, mydriasis, and interference with accommodation.

Tincture of strophanthus was conspicuously feeble in its action upon the heart, and, frequently, before this characteristic action was secured, it was necessary to discontinue its use because the other associated active principles caused gastric disturbance, nausea, vomiting, and diarrhea. It could be taken in teaspoonful doses 3 or 4 times in the 4 hours with the certainty of causing gastrointestinal troubles, and a failure to markedly stimulate the circulatory system. With some specimens, these wide differences in potency and effects did not obtain, and this instance serves to emphasize the variable therapeutic potency of the galenicals generally.

Tincture of digitalis, like strophanthus, was surprisingly variable, and, to obtain the circulatory effects, doses were commonly so large and repetition so frequent that gastric disturbances occurred and compelled discontinuance. These tinctures were set aside and a year later again subjected to a like test. This demonstrated a fact to which, if generally known, no serious attention is practically accorded, namely, and, keep this well in mind, that galenicals in a year's time lose from 20 to 60 percent of their original therapeutic potency, whatever that may have been. No wonder, then, that some tinctures of aconite root and of nux vomica could be taken with perfect safety hourly for 4 or 5 con-

secutive doses, of from 30 minims, 1-2 a teaspoonful, of the former to 2 teaspoonfuls, 120 minims, of the latter.

Recognition of these facts resulted in abandonment of the galenicals and the prescribing of those active principles for which the various tinctures were classified, as, for illustration, circulatory depressants, circulatory stimulants, spinal stimulants, mydriatics, somnifacients, spinal depressants, and so on.

Under existing circumstances, Doctor Beates demands that, in order to obtain positive and unquestioned results, the clinician must test the particular medicament he is administering in order to ascertain what definite effects a given dose certainly will accomplish.

This deduction drawn from the results of observations is logical enough if it is considered essential to prescribe and administer galenicals. The only difficulty is, that most of the remedies investigated many times are needed in cases of urgent emergency and that the patients usually might die before the testing had been completed. Doctor Beates, however, arrives at the more logical conclusion that it is better to make use of the active principles with their definite composition and action, in order to eliminate the annoying disadvantages of the galenicals that may be fraught with great danger to the patients.

ABOUT EPIDEMIC INFLUENZA (SPANISH INFLUENZA)

The present epidemic of influenza presents many peculiarities which are discussed in Supplements Nos. 33 and 34 to the *Public Health Reports*, both of which can be secured from the Superintendent of Documents.

It should be kept in mind that the designation "Spanish" only incidentally differentiates the present pandemic from earlier ones without, however, endowing it with any peculiar characteristics. The affection appears to be an influenza, though, with mixed infection present, since a number of different organisms have been isolated from the secretions and, indeed, the influenza bacillus has by no means been found present in all cases.

The symptoms in the present pandemic are very similar to those of former ones.

One characteristic is, the absence of a leukocytosis during the height of the fever; indeed, a high white count during the first six hours is indicative of another disease than influenza or of a complication.

It has been observed that young people are attacked more generally than are older persons, and it has been suggested that this is due to the fact that the last pandemic, of 1889 to 1891, conferred an immunity on most of those at present over thirty or forty years of age. In view of the ease with which relapses occur, we hesitate to accept this explanation without further support. Indeed, it has seemed to us that an immunity to influenza never is very marked since it is subject to current observations that susceptible persons may fall ill to the disease repeatedly, as a matter of fact, whenever the infection is prevalent.

The most important considerations are, of course, the prevention of infection and the treatment of the disease. For the former, precautions are best taken in the way of frequent sprayings of nose and throat, with antiseptic solutions, like chlorazene, dichloramine-T, and others; also gargling; further, the avoidance of crowded places and careful regularity in one's life and habits. For treatment, the usual indications presented in a febrile disease with onset in the respiratory passages may be met. Calcium sulphide has given very satisfactory service, especially in children, while acetylsalicylic acid has reduced the pain and fever. Early in the disease, a suitable bacterin is curative in its action, while given earlier or before any symptoms arise, it tends to prevent the development of the disease even though exposure to the infection may have taken place.

WAR AND LAUGHTER

"Laugh and help win the war," said one optimist. When laughter is not silliness, when it is genuine merriment, over-riding difficulties and dangers, when it manifests courage and a mental attitude of confidence that would simply find relaxation, then is the injunction worthy of every man's attention. The value of a wholesome laugh in terms of health is undoubted."—*The Social Hygiene Bulletin*.

Miscellaneous Articles

Studies of Food Economics

Conservation of Food

TO classify foods according to their caloric value seems to us to be a mistake. The old classification of our student days we consider a much better one. Still, as there are fashions in medical practice, likewise in female wardrobes; so here each has its day and period.

Under the old nomenclature, we find food classified either as nitrogenous or non-nitrogenous. Of the first class, we have, as representatives, albumins, gelatins, fibrins, and casein. Of the second class, we have the hydrocarbons (fats) and carbohydrates (starches and sugars). In the cereal grains, we have all these elements represented. In the gluten of flour, we find that two primary elements, oxygen and carbon, are present.

Hence, when combustion, involving this material, takes place we find involved a certain number of calories. However, these calories do not fitly represent the nutritive value of gluten. The starches, sugars, and fats, in their combustion, evolve a much larger proportion of calories than does gluten. According to our present nomenclature, the former should take precedence over the nitrogenous tissues of our bodies.

In the structure of our bodies, we find nitrogenous material, minerals, and fats. The starches, sugars, and fats can not alone produce nitrogenous tissues. On the other hand, by the vital processes of the body, nitrogenous material can be transformed into fatty tissues.

Of the foods of mankind, the vegetable kingdom occupies the greatest prominence; the cereals being the most important of these.

Of the cereals, wheat occupies the front rank as to consumption. At the present juncture, there is a shortage of the wheat supply throughout the world at large. Can this shortage be made good by the use of

other cereals? We believe it can! But, in order that this may result, it is necessary that the laity be properly instructed; and there are no better teachers than the doctors. They are oracles, in the eyes of the laity.

Wheat-flour possesses decided advantages over the flour of the other cereals. In the February number of *CLINICAL MEDICINE* we said: "The whole grain of wheat, as a food, is not superior to oats, barley or rice." As a matter of fact, a larger proportion of the human race is nourished by rice food than by wheat. However, wheat is accorded greater importance among the races of Europe and America. This is owing to a quality wheat possesses in greater measure than do the other cereals; namely, that of panification, or bread-raising power.

This bread-raising property is located in the gluten of the wheat, and this represents roughly, 25 percent of the whole grain, 75 percent of it being starch. Now, starch is starch, whether located in corn, barley, rice or potatoes, and has the same nutritive value, as we have found by separating it from each of these materials and cooking the same. Nay, we have found arrowroot-starch superior to all the others mentioned in infant feeding. At present, there is a shortage of wheat throughout the world, and, as there is but 13 percent of gluten in white flour, against 85 percent of starch, the question arises, Can we successfully substitute for a portion of this wheat-starch that from the grains or potatoes? We think it can be done: in fact, it is being accomplished successfully by our bakers, much to the advantage of the people at large. In this thought, we are but a unit among many experts. Let us quote from some of these.

Harry Snyder, in *Science*, says: "The whole wheat byproduct has no physical bread-making value, it is exactly on a par

with corn-meal or any other cereal product that has no gluten. Why, then, should we use wheat byproduct in breadmaking to conserve wheat, when corn-meal or corn-flour or other cereal flours furnished pound for pound so much more digestible protein and available energy?

"We have an abundance of corn and a shortage of wheat. Milk is a necessity as human food, also butter, eggs, and meat, and these must be produced as cheaply as possible. When man uses as a bread mixture 75 percent white flour and 25 percent corn-meal or corn-flour, then all of the wheat by-product is available as animal food, where it is more valuable than when used as human food; while, in turn, corn goes further as human food than the by-product it replaces. This certainly is a valuable and an economical substitution of corn for wheat byproduct, as it benefits both the human and the animal."

Just here, the following from Surgeon General Gorgas, of the U. S. Army, with comments by the writer, we think will not be amiss.

Surgeon General Gorgas says: "It is recognized that particular care must be observed in the composition of bread. In order to prevent sickness among the civilian population of Italy, caused by the use of whole wheat flour, the Italian government was compelled to fix the percentage of whole wheat at 85 per cent. During the Boer war, the British troops in South Africa experienced similar troubles from a like cause; due to the fact that the husks or outer covering of the wheat, irritate the membranes of the stomach [more especially the intestine—A. T. C.] and cause increased intestinal secretions."

Men and women of sedentary habits should mark well and consider this last statement of Surgeon General Gorgas. Before commenting farther, we will present the views of Dr. E. V. Collum, now of Johns Hopkins University, as expressed in an address before the National Association of American Dairy Food and Drug Officials.

Doctor Collum said: "It is time to warn against the widely heralded teaching, that the several diseases recognized as of dietary origin, such as scurvy, beriberi, and possibly pellagra, are, necessarily, due to the absence or to an inadequate supply of vitamins. [This name is improperly-ap-

plied to those indefinite substances supposed to be growth-promoting.—A. T. C.] We should remember, however, the importance of the other factors of which we have already spoken, and, in considering the stand to be taken with respect to the milled products, keep in mind that the grains from which they are prepared are themselves, singly and collectively, as they come from the hand of nature, incapable of supporting the health of an animal during growth."

We can not help believing, both from study, observation, and clinical experience, that it is, not so much the lack of the so-called "vitamines" in our food, as an inadequate supply of certain mineral elements to be abundantly found in fresh fruits and vegetables, notably potassium, that is the primal cause of scurvy possibly also of beriberi and pellagra. Many other diseases might be traced to a lack of a sufficiency of certain mineral elements in our food. Just here, we wish to quote a query of Dr. L. J. Simonton, who writes in the April issue of *The Medical Council*:

"Meat (cured smoked ham) which would resist the action of putrefactive bacteria externally for years would also resist them internally.

If not thoroughly digested, it would not readily putrefy. Can this be the case? Are we, in our effort to get vitamins from fresh foods, slowly poisoning ourselves to death with intestinal putrefaction? If so, this offers, to my mind, a fertile field for reform in dietetics. Creosote is the main preservative element in ham and is largely used, in some form, by the profession as a germicide.

Our protein must lack vitamins, we can probably get them by rearrangement of our present dietaries and still conform with calorific requirements."

But, to return to our main subject.

As we stated above, we have an abundance of corn, but, a shortage of wheat. The question for us to consider is, How can we use conjointly the two crops to the best advantage? A pound of wheat by-products used as human food supplies about 500 available calories and about 0.05 of a pound of digestible protein. A pound of corn-meal or corn-flour supplies over three times as much available energy and 75 per cent more protein.

The wheat byproduct has little bread-making value; it is on a par with corn-

meal or any other cereal product. It ferments readily, hence, favors acidosis. It likewise putrefies quickly. It is, however, excellent food for graminivorous animals, of which we have a great shortage. Hence, we think it the part of wisdom not to divert the byproduct of wheat from its proper use, as in food for live stock, and to substitute corn-flour for that of the wheat flour.

We believe a mixture of one-third corn-flour (starch) and two-thirds white flour will give as light and a more wholesome bread than that made from whole white flour. This would be a saving of wheat to the extent of 33.33 percent of our wheat supply, besides liberating a larger supply of by-product for the animal food.

The food value of corn-starch, likewise that of rice and barley, is equal to that of wheat-starch. The white flour of wheat is 75 percent starch, its gluten, as we have stated above, being but 13 percent. Less than 10 percent is required for panification of a mixture of white wheat-flour and corn-flour in the proportions stated above.

Peanut-meal is a greater tissue-builder than is corn-meal. With a proper proportionate mixture of white flour we obtain a palatable bread very nourishing to the body.

The future wheat supply has a more promising outlook at the present time, still, as a people, we should learn to economize in its use and employ as many substitutes as nutritive elements in our food supply as is possible.

There are produced, annually, in this country, 150,000,000 bushels of barley and 500,000,000 bushels of corn, much of which is wasted in the production of alcoholic liquors.

In closing let me present this thought: Let our people consume more fruit in our dietary, and they will enjoy better health, with the consequent less need of the doctor's services.

A. T. CUZNER.

Gilmore, Fla.

THE TREATMENT OF DIPHTHERIA

Your editorial on tonsillitis prompts me to say a few things which I trust will be advantageous to members of the profession. In the first place, I wish to mention that I was graduated in 1883 and was a disciple

of old Doctor Muscroft, of Cincinnati, and his witty coadjutor, Doctor Mussey, and later was under Dawburn and Wyeth, of New York, serving in the surgical class of Doctor Bodine, Wyeth's successor. During my early years of practice, diphtheria and ulcerated tonsillitis were not differentiated as now, the bacterial theory at that early date not having been elaborated. However, at that time, I employed just as good bactericidal treatment as is in vogue today. I passed through many severe sieges of malignant diphtheria and the "putrid" type of tonsillitis was very common, and my results then were regarded as phenomenal.

I have been able to recognize three distinct types of diphtheria: First, we had the most common, the "cheesy" type, in which the deposit was of the cheesy, flaky character. As the disease progressed, flakes would loosen and could be removed. The second type showed a deposit that was shiny, smooth, and the membrane very tough. Thirdly, occasionally we encountered cases presenting the gangrenous type, in which the membrane assumed a blue aspect, with a most offensive exhalation. The cheesy type was most prone to invade the nares and larynx.

Before the days of antitoxin, when called to cases of diphtheria presenting the first or second type, I usually prescribed, for the toxemic fever, tincture of baptisia, 30 drops to a half glass of water, repeated every half hour or hour. I also gave mercury protoiodide, about 3-100 of a grain every hour, in powder form. If there was much offensive or ropy, stringy exudate in the pharynx, I gave, besides, potassium bichromate, in about the same dosage. In the worst cases, I often gave 1-50 and even 1-10 of a grain of mercury protoiodide. If the deposit was inclined to invade the larynx, I substituted the mercury biniodide in doses of from 2-100 to 5-100 grain every hour. If, as sometimes occurred, the glands of the throat and neck became violently swollen and inflamed, the submaxillary and sublingual, as well as the cervical, glands being involved, I gave mercury cyanide, about 1-1000 grain per dose. This is a most powerful drug, but, there is no agent in the entire materia medica that will reach down and cure these cases as will this drug.

After diphtheria has invaded the larynx, you have used antitoxin in huge doses,

but, diphtheritic pulmonitis has developed, and you have intubated the sick child, but, its lungs are filling up and its vital forces failing—then cyanide of mercury will save the child. The prompt action of this mercurial is most remarkable. As a rule, I give a dose every fifteen to thirty minutes until improvement is manifest.

Now, as to local treatment. The chloride of potassium (not the chlorate) has been my sheet-anchor. I always used a saturated solution, swabbing the throat with it every one or two hours. If the nasal sinuses were involved, I used a small syringe and injected a quantity of it up the nares every one or two hours. As a rule, in forty-eight hours, the deposit melted down and detached itself. In addition to this, in order to sustain the system and to antagonize the toxemia, I prescribed 2 or 3 grains of protonuclein every two hours.

Before the days of antitoxin, I cured my cases of laryngeal diphtheria with bromine in solution, made about as strong as the child could take it. I had the habit of always applying ice to the throat, and I still follow the practice. Inhalation of vapor from quicklime served me well in the diphtheritic membranous croup, in conjunction with the treatment described. In some cases of the flaky variety of diphtheria, in which the membrane desquamates, can be detached and removed, I have seen excellent results from a quite strong solution of diluted nitric acid. How it acts, I will not attempt to explain, but, I can say from experience, that it did prompt work in two instances.

I have passed through several epidemics of diphtheria and my record of cures will compare well with the very best. I seldom use antitoxin except as a preventive. Only lately, I employed, as a preventive, the treatment outlined in three separate families exposed to diphtheria—one a family of 10 children—and not one took the disease. I might have used antitoxin, but, did not, and the course I followed was 75 percent cheaper.

Now, as to treating ulcerated tonsillitis or suppurative tonsillitis (quinsy): In the first, I usually give 15 or 20 grains of sodium salicylate in solution every two hours and order a gargle or swabbing of the throat with a saturated solution of potassium chloride every hour. In quinsy, I

give the sodium salicylate in the same dose or larger with calcium sulphide, two grains every three hours, and apply an ice-bag to each side of the neck over the tonsils. Remember, ice, ice, ice does the work in reducing the turgescence and tumefied tonsils and will prevent, in most instances, tonsillotomy! Another prescription which I have used as a local application in putrid, ulcerated tonsillitis as follows:

Tincture of myrrh.....	dr. 1
Tincture of ferric chloride.....	drs. 2
Potassium chloride	dr. 1
Glycerin	oz. 1
Water	oz. 1
Label: Apply, every two hours, with a swab, just to the ulcerated surface.	

This is not a very pleasant preparation to use, it also works slowly, but, it always does the work.

Another suggestion: In those cases of recurring acute pharyngitis—especially during the windy, dusty seasons, in which the throat feels dry, parched, and smarts, and when there is an injected mucous membrane and sometimes edematous, you will find the following most excellent:

Tincture of belladonna	gtt. 5
Specific tincture of mangifera.....	dr. 1
Simple elixir	ozs. 2
Water	ozs. 2
Directions: Give one teaspoonful every hour.	

In a subsequent communication, I am going to say something of value in the treatment of the various types of pneumonia, and I shall show the profession how to treat it without a fatality.

J. H. LOWREY.

Neola, Ia.

REMOVAL OF GALLSTONES WITHOUT OPERATION

I have used the following treatment for more than twelve years, with good success, for the evacuation of gallstones, as illustrated by two specific cases:

A mother of 8 children was recovering after having her birth-track repaired at my sanatorium. Her nurse told me of the patient's passing some "round worms" in her bed. So, I prescribed worm-remover (Barron) ordering 8 granules to be taken at bedtime, and 4 granules every two hours the next day, drinking with them a cup of

very hot water, sipped. This to be followed at bedtime by 2 compound cathartic pills, U. S. P. The nurse was to save and wash out all the stools passed for twenty-four hours or as required, and collect the "worms" in the bottom of the vessel, to be examined under a magnifying glass.

Instead of worms, they were gallstones. I then prescribed for the patient 1 ounce of olive-oil flavored with wintergreen, so divided that she received 1-3 ounce before meals three times a day. This treatment was repeated every week for six months, when all tenderness of the gall bladder had disappeared. The woman's skin lost its yellow color and her eyes were bright and clear.

Then the woman said that her 18-months-old baby was passing gallstones, specimens of which she brought for inspection. The baby's skin was yellow, and the child was cross and did not sleep well. It received the same treatment, in proportion, of course, to its age.

Since then I have given this treatment to many patients and with a large proportion of cures. This treatment can be used to diagnose the presence of gallstones, which it forces out if the gall-ducts are open.

ALDUS A. HOOPMAN.

Seattle, Wash.

THEM CALCIDIN TRACHEOTOMY-TUBES

Say, doc, I am getting two or three more journals. One is a big-league journal, and I see in said big-league journal where a guy tips 'em off that calomel, podophyllin, salts, and aloes have all the same action—just moves the bowels. Say, doc, that fellow may be hitting seven hundred in the big league, but, he would not see first base once a season down this a'way. An', say, doc, you know a fellow can take salts until he can give a goose cards and spades and go right on and have a good big sick-headache and keep it until he takes calomel and podophyllin and shakes up his liver. A fellow that shoots pills down this a'way will have to know this, or he will soon be looking for a new location. We have a right smart chills and fever and need a'plenty of quinine and calomel, also podophyllin and iron. Old Doc Wood's ferritonic is a jimslicker, too.

Say, doc, I was driving down the road a'while back and a doctor came out of a

house and flagged me, and says he, "Have you'all a tracheotomy-tube with you?" "Yes", says I. Says he, "Come in here quick, doc, a kid has the croup and is going to croak if something ain't done right now. He ain't slept, eat or hardly breathed for two days, and I have give all kinds of croup-medicine, and he ain't no better." So, I goes in and sees the kid trying mighty hard to get a little wind. I opens my grip and takes out two little calcidin granules, mashes 'em up in a little water and slips 'em down the kid's gullet. Says he, "Ain't you going to operate?" Says I, "I have done operated." Says he, "You are a fool," and out he goes and jumps in his flivver and beats it for the hospital. In five minutes, I gives the kid a couple more of them calcidin granules, and in another five minutes a couple more. Then I lights me a cigarette and sits down to read about the baseball score.

In forty minutes, the doctor what called me a fool comes breezing in with a specialist, and a bag of instruments. But, they didn't use them, for, by that time, the kid had sucked the old woman dry and gone sound to sleep.

Say, doc, a fellow always ought to carry with him a bottle of them wizard calcidin "tracheotomy-tubes," for, he never can tell when he will bump into a croupy kid ready to wheeze out his young life.

So long, doc, I'll see you again along some time next year.

W. B. DOVE.

Macon, Ga.

[Fine, doc, same to you. Only, don't wait too all-fired long to come again.—Ed.]

STUBBORN ECZEMA CURED WITH THYMUS GLAND

I wish to report the following case of eczema, which was a little unusual in its course, very stubborn to treatment, and which responded to a therapy that I have never seen advocated for this condition.

With etiology, symptoms, and course of eczema, most of us, of course, are fairly familiar, comprising, as it does, about 20 percent of the skin diseases as we see them. So, I shall not take up time going into these details.

The treatment of eczema varies according to its stage at any given time. Rem-

edies suitable in the acute stage do no good when the condition has passed into the chronic state, while remedies that will alleviate or cure the chronic form must never be prescribed for the acute stage.

It has been my good fortune, or, rather, misfortune, to be able to follow one particular case of eczema from start to finish and to see the patient ever day for almost a year and a half. During that time, the disease passed from the acute stage into one of general septicemia, with multiple abscesses, then these gradually disappeared, and then the trouble became essentially chronic, resisting practically every recognized form of treatment. There would be acute exacerbations, after which it would pass from the fairly quiescent chronic condition of scales and fissures to the acute stage, with vesicles, blebs, and softening of the cutis.

Briefly, this is the case: Patient, male; age, 35 years; height, 5 feet 8 inches; weight, about 175 pounds; family-history negative. He has had the usual diseases of childhood, but not diphtheria or scarlet-fever; had appendicectomy performed six years ago; had tonsils removed in 1907; had hemorrhoids removed in about 1914. Otherwise, he is strong and healthy. In February, 1917, he removed to Coeur d'Alene, having an elevation of about 23,000 feet, from a place approximately 600 feet above sea-level. He is a vegetarian, and has been so for the past three years.

This man, then, soon after he arrived in this town, noticed a rough patch appearing upon the inner surface of one thigh, of about the size of a half-dollar coin and faintly pigmented. It was dry, without any blebs. When shown to me, it looked like *tinea circinata*. It grew slowly in size until it became about the size of a silver dollar. Then, under desultory treatment, it gradually faded and disappeared entirely. However, coincidently with its fading away, the skin between the three smallest toes of each foot began to soften and peel off as if it had been scalded. The inner and the plantar surfaces were the only ones at first affected. Later, blebs and vesicles appeared, broke, and discharged serum and, often, blood. Various lotions were being used with more or less effect, until the disease apparently had run

its course in this location, the toes healing up spontaneously.

Soon, however, the eruption appeared upon the hands, between the third, fourth, and fifth fingers simultaneously. Its course in this location corresponded to the one pursued by it on the feet. The treatment tried was the same, and, with the same result: the trouble could be kept fairly well under control by means of constant application of remedies, but, it never was entirely cured—one day's neglect, and it would be blooming in full force.

After several weeks, the hands healed nicely, however, the feet again broke out as soon as the improvement began in the hands. This alternating kept up all summer until in September, when, while the hands were in full eruption, the blebs apparently became infected and absorption took place rapidly: the axillary glands becoming involved and the patient being taken with chills and sweats alternately, with a temperature of between 102° and 104° F. Several abscesses formed on the hands, fingers, upper arm, on the back, and no less than five deep-seated ones beneath the fascia in the thigh and into which latter I had to plunge a knife 1½ inches deep before reaching the pus. Cultures taken from these abscesses demonstrated a pure staphylococcal infection. With rest in bed, wet dressings. (Allen's formula), and autogenous bacterin (hypodermically), and echinacea in large doses internally, the infection subsided in about two weeks. However, the eczema went merrily on, first on the toes, then on the fingers, alternating with amazing regularity.

I tried practically every remedy recommended by Stellwagon, Sequeira, Hartzell, Van Harlingen, Mracek, Forcheimer, and Sajous, but, all with indifferent results so far as permanency was concerned. I did find that boric acid in solution for the acute and in ointment form for the chronic form gave the best and most uniform results.

The patient was thoroughly examined by several physicians. The urine was normal in amount and in its constituents. The red cells of the blood were normal as to count and appearance; no leukocytosis existed, except during the period of acute infection; the hemoglobin content was 95 percent by the Sahli and Tallqvist scales; the blood pressure was 120 and 70, respect-

ively. The bowels moved regularly once or twice daily. The appetite was good and there were no digestive disturbances. He slept about eight hours every night. Never felt better in his life.

After much assiduous study on this case, I decided that the trouble was not caused by external irritants, also not by irregularities of diet, for, he lived very simply and had no vices except that he smoked. As a matter of fact, I had exhaustively examined into every known cause and, to my own satisfaction, had excluded every one of them. Indeed, there remained but one possible cause, and this one which I had never seen suggested, namely, the lack of one or more of the internal secretions. I did consider endocrinal *hypersecretion* before beginning treatment, but, since the idea was wholly empirical, I decided that it would be easier as well as quicker of determination to assume a *failure* of secretion, and to rectify that.

Thyroid-therapy has been heralded for almost every conceivable condition, so, of course, I considered that first. However, the patient was normally bright and without signs of myxedema; he had been under my care for a year and a-half and I had noticed no signs of mental deterioration or sluggishness. Hence, I thought that hypothyroidism could not be involved.

So little is known of the action of the pituitary body in the human economy and so little is to be found in the literature concerning it, that I did not wish to experiment with so powerful a measure without first exhausting all other possibilities. Only very little is known concerning the function of the thymus gland in adults—in fact, it seemingly has no function. Nevertheless, I began to give thymus gland experimentally.

This was in the first week of June, 1918. The eczema was then in the acute stage, with the typical vesicles containing clear serum, and which would rupture and discharge or weep for several days, then dry up and form scabs and scales, these later peeling off and leaving a clean, slightly reddened base of thin skin. This, later again would crack and become fissured; this in turn would gradually heal and leave a thickened skin, which scaled and peeled, until it regained its original texture. Then,

inside of five or eight days, the whole performance would be repeated.

Upon beginning the use of thymus gland, everything else was discarded, the patient using no medicine of any description, either internally or externally.

The dosage of the thymus gland was 15 grains in capsule with each meal and occasionally a dose at bedtime. Inside of four days, the vesicles had dried without rupturing and the skin assumed its normal color and texture, except upon the palmar surfaces, where it remained somewhat thickened.

The remedy was continued for ten days, then stopped. At the end of a week, the vesicles appeared again, promptly subsided, however, when the patient again began taking the thymus extract.

This course has been repeated now three times, and, with the same invariable results each time. As a consequence, I am led to believe that this patient's eczema is attributable to a *lack of thymus-gland secretion*.

I have treated many hundred cases of eczema and have never had one resist treatment for more than a few weeks. The customary remedies were employed in this instance, without avail, over a period of almost a year and a half—a fact, by the way, which shows that the patient had unwavering confidence in his physician. To tell the truth, this is as it should be, for, I was the patient.

This one case may not be of much value as a contribution to the literature on the subject. Also, we know from past experience that thymus extract is not necessary to cure the majority of eczema-cases. Nevertheless, I would advise a trial of this endocrine therapy in stubborn cases, those resisting the ordinary measures employed for this condition. At all events, it, apparently, is harmless, for, I noticed no untoward symptoms, although on the lookout for such.

ALEXANDER BARCLAY.

Cocur d'Alenc, Ida.

SOMETHING TO SNEEZE AT

While it is pretty late for hayfever poetry and we sincerely trust that all the unfortunate victims of this pestiferous in-

Fiction have recovered from their annual malady, we venture to reprint a little poem that was sent to us having been clipped from a newspaper, we know not which—nor whence it came. Hayfever sufferers may read it with fond (?) memories. Others will be aroused to sympathy. The poem, which is entitled "Something To Sneeze At" and is said to have been "written between 'em", is as follows:

Hayfever time! Quite safe to bet
Each season brings these days of fret;
When streaming nose and eyes obtain,
Brisk Browning sneezes jar the brain,
And mere existence is regret.

'Tis like a loathsome, lifelong debt,
Whose payment must be yearly met:
Attempts to dodge it oft are vain—
Hayfever time!

Though in annoyance, sore beset,
We storm with bitter epithet,
As autumn frosts bedeck the lane,
Subduing transient woes again—
How speedily may one forget
Hayfever time!

Albuquerque.

THE MAKING OF AMERICAN CITIZENS

The Chicago stockyards give employment to men and women of more different nationalities, probably, than can be found together anywhere else in the world. Not only are the stockyards unique industrially, but, also for the reason that multitudes of immigrants there have their first experience in being permitted to work under more favorable conditions than those to which they were accustomed and to learn their first lessons in citizenship in a democratic country. Recently, flag-day exercises were conducted at the plant of Armour & Co., and, on that occasion, fifteen thousand employees, more than 75 percent of them of foreign birth, participated.

When Mr. J. Ogden Armour appeared on the speaker's platform, he was acclaimed in more than thirty tongues. Every foreign tongue spoken in the United States can be heard in a tour of the Armour plant, and the "*Viva, V'ive, Evviva, Atzye, Nicch Zyje, Zivio, Da, Zdravstvuet, and Banzai*" were given as lustily as were the typical "Rah's" of the Americans. It is the occasional personal touch that counts in great organizations and events of this kind, where

the "boys" are given a chance to come into more or less intimate contact with "the big boss", always are reflected for days afterward in increased efforts on the part of the employees.

The flag-raising program was held in front of the Armour wholesale market and, after the singing of "The Star Spangled Banner", in which Mr. Armour led, the flag was raised while a bugler played "The Salute to the Colors." During the exercises, the crowd spoke in unison an "American's Creed", which was as follows:

"I believe in the United States of America as a government of the people, by the people, for the people; whose broad powers are derived from the consent of the governed; a democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable, established upon these principles of freedom, equality, justice, and humanity, for which American patriots sacrificed their lives and fortunes. I, therefore, believe it is my duty to my country to love it, to support its constitution, to obey its laws, to respect its flag, and to defend it against all enemies."

A YANK'S PLEA

Dear Folks Back Home:

Say, listen here!
We fellows hold our young lives dear,
We're over here to lick the Huns.
It's up to you to give us guns!
We'll do our best. But, it takes cash
To furnish all us guys with hash;
Now, get this straight and understand:
All you must do is, lend a hand.
So, we suggest you buy a "bond"—
We'll do the rest across the pond.
You're giving aid by lending gold
And turning Fritzie's big feet cold!
Those bonds are good investments, too;
So, buy a few! It's up to you!
Now, *au revoir!* Help down the Hun!
With greetings from

Your Loving Son.

The Orion Times, Sept. 19, 1918.

[This appeal follows aptly upon the preceding one. Liberty Bonds are not sold at present, true; but, there must come another drive, probably next spring. And then, let us remember the Yank's plea. In the meanwhile, the seven war-service associations need money as badly for their work as does Uncle Sam for his—and ours. Surely, "Yank" would have urged

us to help them, if he had thought of it. So, let's all dig into our pockets and help. Also, let's get ready for the next Liberty Loan drive.—Ed.]

A JOINT APPEAL FOR JOINT SERVICE

The seven organizations which by their work overseas have kept up to pitch the morale of the American army will appeal to the public in unison this fall for the money with which they will carry on their activities during the coming twelve months. In a drive known as the United War Work Campaign, \$170,500,000 will be raised, the largest sum of money ever subscribed by a nation for patriotic service. The agencies cooperating are, the Young Men's Christian Association, the Young Women's Christian Association, the National Catholic War Council, the Jewish Relief Board, the War Camp Community Service, the American Library Association and the Salvation Army. The merger, which comes at the request of President Wilson, will relieve the public of repeated separate demands. The share of Illinois in the drive will be \$12,740,000.

It has been these agencies which have carried over to the man in France the comforts which his family at home would wish him to have, but, is powerless to provide for him. Back of the lines, American workers from the several organizations are helping the doctors and nurses bring back to strength the men whom the stretcherbearers have carried in. Their gymnasium directors are keeping the soldiers physically fit. The necessities which the private or officer needs, the civilian officer, there only to serve him, sees that he gets. More than any other means, the recreation and good fellowship of the canteen hut keep up the soldiers' spirit and send them back to their regiments ready to fight stiffly.

The Y hut, the Salvation Army hutment, and the K. of C. clubroom have offered their bright hospitality to all the men with the army. Shows and movies have kept laughter around them. There have been lectures at the club centers. America's leading singers and actors have amused the boys from the tiny clubroom stage, and always within the man's reach

have been the books and magazines which the American Library Association has sent over. Whenever a rush was on and reserves were marching up to relieve a regiment, the women of the Salvation Army have been waiting outside their hutment, ready with hot drinks and hot food.

In the small Blue-Triangle hut set up beside the hospital barracks, the Young Women's Christian Association is performing a similar work for the American nurses. It is giving easy chairs, books, and music to the girls who have stood all day on the hard stone floors of the hospital wards. The Association has also cast its blue shadow of protection over the other American women serving with the army overseas, and to the women and girls of the French munition factories it has offered in its Blue-Triangle foyer a clubroom to which they can come for rest and amusement.

In this country at the camps and naval training stations, the Jewish Welfare League and the War Camp Community Service have joined in the task of keeping the military and industrial armies keyed to their task of winning the war. More than one hundred thousands Jewish men in the army and navy are being ministered to by Jewish workers. Rest rooms and libraries in and near the camps have been equipped with English, Yiddish, and Hebrew literature. Concerts and lectures at the J. W. B. centers, as at clubrooms of the other welfare organizations, supply amusement to every enlisted man, regardless of his race or creed.

The War-Camp Community Service meets the soldier as he goes out from camp and gives him its hospitality in a strange town. It gives soldier and sailor a clubroom in which they can meet the right sort of people and entertain their women friends. When the man away from home becomes also the man away from camp, the War Camp Community Service is there to help him.

In both, this country and overseas, the men and women who have gone out to represent the seven organizations have worked with a singleness of purpose. Each has had as its aim the keeping strong and fit the officers and men in every regiment. They have dovetailed the work of their organizations in common service. They now return to the Ameri-

can public with a common appeal for patriotic funds. The share of each agency in the campaign is:

Young Men's Christian Association	\$100,000,000
Young Women's Christian Association	15,000,000
National Catholic War Council	30,000,000
Jewish Welfare Board.....	3,500,000
American Library Association..	3,500,000
War Camp Community Service	15,000,000
Salvation Army	3,500,000

[This pithy and terse description of the work accomplished and to be continued by the several welfare associations must fill our hearts with joy and gratitude, since it assures us that our boys are taken care of while their serious duties keep them away from home and in danger. We should, all of us, be as eager and anxious to help in this work as we were to subscribe for Liberty Bonds. Let each home-doctor give his check for \$5 or \$10—more, if he is able. The result will be gratifying, and helpful.—Ed.]

THE DIAGNOSTIC VALUE OF PAIN*

The physician who faithfully applies himself to the thoughtful study of the mysterious phenomena of pain is, indeed, quite consciously cognizant of the truth that the subject is truly perplexingly entangled and apparently unlimited in its scope. But, the tireless student and thorough investigator is gladdened and encouraged to greater effort by personal achievement and keen appreciation of the fact that the confounding intricacies of the subject are beautifully illuminated, occasionally, by the manifestation of seemingly unsolvable and untraceable features of pain-symptoms that challenge and demand his trained ability to diagnose successfully.

In the study and consideration of the symptoms of pain, the physician should not enter into the task with the expectation of reaching a goal where new symptoms may possibly be discovered; for, such a goal is but the unattainable creation of the mind and vivid imagination of the seeker only. Of course, he may have the temerity boldly to assume the credit for the sole

discovery of a new symptom of pain, but, all that he is really able to accomplish is his own striking realization of failure by learning, through more extensive reading and more complete investigation, that he simply succeeded in deluding himself, for a brief time of undulating enthusiasm, by such an untenable and unprovable affirmation. There were times, however, in the history of medical practice when the physician could truly maintain his affirmation of discovery of new symptoms of pain, but, that time is past for you and me.

One of the greatest hindrances to the successful experience of a physician is the pernicious habit of taking some things for granted while lingering insufficiently long on the propitious highway of careful, painstaking investigation of important pain-symptoms. To endeavor in a modest way to awaken a slumbering desire and to stimulate thorough investigation of the essential features of pain-symptoms, is the only purpose of this paper.

He who expects to hear anything new, either in symptoms of pain or in the employment of new methods for determining the inception of painful conditions, will be sadly disappointed. And he who even anticipates the pleasure and profit that might be his, as a result of the reading of a carefully prepared and complete treatise on the various symptoms of pain, will be most woefully disillusioned. All that may consistently be accomplished in the brief space allotted for the task is an urgent effort to impress upon our minds more effectually the recognized necessity of more frequent consultation of our best authors—whose invaluable books often lie dust-covered and untouched for months upon our book-shelves—and the more thorough application of the beneficent fruitage of these best teachers to the consideration of the painful afflictions of our patients. We should not strive so energetically to discover something new in symptoms of pain, but, should strive more earnestly and more diligently to fix the known more indelibly upon our memories.

In this day of rapidly progressive medicine, the physician is, indeed, impelled to greater and closer application of his time and talents to the more thorough investigation of the causes of disease—if it is his laudable ambition to maintain his professional standing and reputation as a twen-

*Read before the meeting of the North-Western Ohio District Medical Association, at Van Wert, Ohio, September 19, 1918.

tieth-century member of the healing cult. And, in the studying of the causes of disease, he must more closely observe the origin and trend of its symptoms. The untoward tendency of unprofessional neglect and the unpardonable habit of superficiality, so prominently characteristic in many physicians, in conducting physical examinations of patients have been more effective in curtailing the clientele and income of the physician than any other factor in medical practice.

In this age of emphatic affirmations of personal achievement in all lines of specific endeavor, the medical profession can not be consistently excluded. Wonderful claims as to superiority of thought and application of ideas have been successfully substantiated in medical circles of the recent past. But, unfortunately, there is not so much investigative thought force used today by some physicians, as methods of automatic application of diagnostic principles are employed. The average physician of today is, seemingly, well satisfied to apply, superficially and on the pretext of "What's the use?", the well-defined methods of diagnosis as laid down in the best textbooks of the day, rather than to spend any time and thought-force in an effort to impress more deeply into his gray matter the requisite knowledge gleaned only through personal investigation of the consequence of pain in his patients. He should realize that the pain the patient suffers is only a subjective symptom that may be simply the forerunner and danger-signal of approaching disease.

It is in such cases, especially, that the diagnostic value of pain is truly apparent. Many incipient encroachments of disease may be assuringly halted, through their prompt recognition by the competent diagnostician, as effectually as the brave, thoroughly trained allied soldier-boys halted the "Hun peace-storm" on the Marne.

Pain may be defined as a pronounced manifestation of nerve irritation, which may vary in intensity from a mildly disagreeable sensation to acute, unbearable anguish. Pain may proceed from undue pressure, increased tension, or spasm, separation of parts by violence, or any derangement of functions.

Pain often is the only symptom that prompts a patient to consult his physician.

In his effort to determine the cause of the pain, the physician will find it best, in many cases, to listen patiently to the patient as he describes his pain. After the description has been given, the physician should determine the location, cause, and character of the pain. He should remember that the exact location of a pain aids very materially in the determination of the diagnosis; that the cause of the pain aids unerringly in the proper recognition of the disease; and that the character of the pain, in many instances, is the clincher in the final and indisputable proof of a correct diagnosis.

It seems utterly needless to affirm that it should be the bounden duty of every physician faithfully to determine the various causes of painful conditions in every instance, by all the symptoms manifested. But, there can be no fixed or invariable law governing the method of examination in such cases; for, it is an appreciable fact that every case is truly a law unto itself and that pain does differ greatly in patients afflicted with the same disease. Every physician should cultivate assiduously his own peculiar method of physical examination because of characteristic idiosyncracies in patients. No absolutely correct or infallible guide in medical diagnosis has yet been promulgated that would enable the diagnostician to recognize the exact cause of pain in a moment's consideration.

The same theories on pain obtain today in all the textbooks on the subject, with the exception, however, as to the classification of pains. Appropriate adjectives are more extensively used by some authors than by others, simply because they seem to see the necessity of making the classification more thorough and complete. There was a time when the physician was fully satisfied to call a pain mean, ugly, awful, terrible; but, today, the educated physician must differentiate pains as direct, remote, dull, sharp, throbbing, burning, boring, shooting, lancinating, neuralgic, rheumatic, sciatic, hysteric, suggested, autosuggested, spontaneous, referred, radiated, obscure, and on so without end.

I presume there is not one physician here today that is not inclined to the belief that this more recent classification of pains is ample proof of the appreciable progress in the diagnostic value of pain.

We can not possibly be overprofuse, on certain occasions of medical examinations, in the employment of adequate and appropriate words to express forcibly and intelligently our opinion of a painful condition in a patient; for, some pains do seem to inherit the provoking necessity of complete recognition, through the use of words, that may be deemed, by our Christian prayer-meeting Esculapian, a superfluity of exaggerated wordy exuberance.

It is, indeed, true that the pain elicited by the diagnostician during the physical examination of his patient really does aid in the determination of a correct diagnosis; but, it may not be in the least necessary for him to add superfluous adjectives or even recalcitrant verbs in the effort of classification of the disease that causes the painful condition. Freedom of verbal expression, however, should not be denied the keenly suffering patient, while he enthusiastically aids the physician in the effort to arrive at a satisfactory and pleasing diagnosis.

Every physician is well acquainted with the patient in whom the sensibility to pain is likely to be increased by its long continuance, and also with the patient in whom the habitual endurance of pain has a marked tendency to blunt the pain-sense. So, the physician should carefully observe the countenance of the patient as he relates the story of his suffering, as also when pain is elicited by manipulation. If the patient assumes the expression of the martyr, he undoubtedly is a habitual sufferer. [Certain people who "enjoy poor health", adopt the expression of a martyr without adequate excuse, pain then may be subjective, with slight objective foundation.—Ed.] If he employs words of especial distinction in the description of his pains and his countenance beams with intelligent appreciation of their beneficent effect, he is human and the pains are unquestionably of recent origin.

Some one has said that pain is to the physical as conscience is to the spiritual. This evidently is a true saying, for, any digression from natural law requirements is sure to precipitate the inevitable function of pain and our indiscretion brings on the punishment we so justly deserve. And when we digress the beneficent blessings of the divine law, we also precipitate an

avalanche of most peculiar sensations of pain and remorse.

Pain is not our enemy, but, is our ever-awake and convincingly efficient friend. Pain has its own noble joy, when it kindles a strong consciousness of life, before stagnant and torpid. It is, seemingly, pitiless pain that leads to the saving of life, but, its cause must be recognized in time. Pain is the necessary contrast to pleasure. It ushers us into existence and is the first to give us consciousness. Placable pain alone is capable of exciting the organs into activity. It is the companion and the guardian of human life.

The laws of nature are all directed by a divine Providence for the express purpose of preserving life. Pain seems in all cases to precede the mutilation or destruction of those organs that are essential to vitality, and for the end of preserving them. Pain seems intended by an all-wise Creator to prevent the dissolution of organs, and seemingly fails in the effort to follow their destruction.

Some audacious author has dared to insinuate that most diseases are the ignoble result of nefarious medication that has been prescribed, to relieve and remove a beneficent warning symptom on the part of benevolent nature. But, upon thoughtful, respectful, unprejudiced consideration of the seemingly unwarranted allegation, I am led to the belief that not one physician would hesitate to honestly confess that the indictment is, indeed, true.

To you and me, is given the essential task of ferreting out the cause of each diagnostic pain in every patient to whom we are summoned to administer. The kind of service we individually render will be peculiarly our own, but, it should always be intelligent, effective professional service.

BURTON R. MILLER.

Tiffin, Ohio.

CONGENITAL ABSENCE OF ANUS IN AN ADULT

Since the following rather unusual case may prove of interest to others of the "family", I venture to report it briefly.

Last May, being called to attend a woman in her fifth confinement, I found a dry labor, with breech presentation, and completed the delivery under chloroform-anesthesia, and in which I experienced more

trouble than I have had before in bringing down the legs and arms. The after-coming head was delivered with the forceps, of course. The cord had been under pressure for probably ten or fifteen minutes while the arms were being brought down and the head delivered. We had an asphyxiated boy, and it required full thirty minutes of persistent work before normal breathing was established.

The strange part of this case I did not discover until lately. The woman in question came to me with the request that I give her something to cause her bowels to move better. Examination revealed that she has no anus! The rectum, I found, terminates one inch from the posterior commissure, in a small opening not noticeable to the eye, ordinarily, and capable of admitting the index-finger. This orifice, though, seems to have a sphincter, and of good quality; however, the woman complains that the bowels will not move without her taking a saline physic. This she does two or three times a week, and then there will be a leakage of fecal matter for two or three hours after the first evacuation. I have put her on a compound, to promote a more normal action, but, do not know what the result will be.

A plastic operation designed to create an anal opening in the normal place, it seems to me, would make things worse than they now are; considering that probably there would be no sphincter to protect it.

C. A. FREEMAN.

South Milwaukee Wis.

[This case is, indeed, an interesting one. However, cases of this kind are occasionally reported, and, as a rule these malformations are rectifiable by operation. Of course, the difficulty pointed out by you, that is, the creation of an artificial sphincter, is to be considered. In some instances, the muscular structures are sufficient to maintain control of the bowel.]

This case, we dare say, will require considerable study and research; this much, though, we may say: Your patient's rectum opens into the posterior wall of the vagina, a condition known as atresia ani, or, as it is more frequently called, imperforate anus. This malformation is not exactly infrequent and depends upon the failure, in fetal life, of the rectum to grow down and unite with the anal tissue. In some instances, there merely is

present a blind rectum without any opening whatever (atresia simplex); in others, the rectum may communicate with the vagina or urethra (atresia ani vesicalis, urethralis, or vaginalis).

The occurrence of this malformation, or imperfect development, will be understood better if it is remembered that, embryologically, anus and rectum are developed from entirely different layers of the blastoderm and that the blood supply comes from different sources.

The correction of this condition, naturally, depends very largely upon circumstances. In the case of your patient, there seems to be a reasonably good sphincter, the difficulty being that the pouch of the rectum descends lower than the rectal opening into the vagina, this explaining the leakage of fecal matter for some time after catharsis.

We have the impression that an operation to create an anal opening in the usual place would seem to make matters worse, because of the impossibility to create a sphincter to protect it.

In any case, any discussion of the problem can be but tentative and its ultimate solution would have to be left to the decision of a competent surgeon, who very naturally would base it upon the anatomical relations in this case.—Ed.]

HOW TO GET RESULTS FROM CALCIUM SULPHIDE IN INFECTIOUS DISEASES

I carry in stock the 1-6-grain granules and yellow 1-grain tablets of calcium sulphide. This drug can not be used with much success unless you stick very closely to the principle of cleaning out the alimentary canal, first, last, and all the time during the cure. As a rule, I give 1 or 2 grains of calomel, followed by saline laxative. Then, in the case of children, I give the 1-6-grain granules, and the 1-grain tablets to adults, *after eating*. This drug should never be given on an empty stomach, or, the patient will vomit. I have prescribed it for more than a year in a case of rectal fistula, in the presence of tuberculosis, and there never has been stomach irritation. I always give with it either anticonstipation granules (Vaugh), anticonstipation granules No. 1 (Mulford), or podophyllin, 1-6 to 1-4 grain. These work together very well. I have pre-

scribed the calcium sulphide in all exanthematous diseases, and it works like a charm. In all blood discrasias, the combined arsenates with nuclein are added or whatever other treatment may be needed.

In Neisserian infections, calcium sulphide is one of the very few drugs that do good work. I begin with 1 grain after meals and have the patient eat something at bedtime, when they take their last dose of the medicine. This dose is increased by 1 grain every other day until 7 or even 10 grains of the drug is being taken four times a day. Then decrease by 1 grain every other day until the minimum of 1 grain is reached.

Some day I may write about other things that have been helpful in my practice and might help my brother physicians.

ALDUS A. HOOPMAN.

Seattle, Wash.

[We hope that you will write again, brother. Such helpful articles are needed by us all.—Ed.]

CASE-REPORTS ON ECHINACEA IN INFECTIONS

In an editorial in *CLINICAL MEDICINE* for November, 1917, a case of virulent eye infection is described, in which mercuric-oxide ointment, locally, calcium sulphide to saturation, and all other local and constitutional treatment failed signally to relieve, but, which yielded for the better in twenty-four hours to dram-doses of Lloyd's echafolta administered every two hours. Prompt recovery took place after 2 ounces of echafolta had been used.

In the same journal for July last, Dr. W. K. Johnson describes 2 cases of puerperal infection treated with echinacea as the dominant remedy, under the most unpromising and unsanitary conditions, with the most gratifying success.

My experience with echinacea, I am sorry to say, has not been so happy, as the following reports will show.

I was called to Mrs. H., aged 28, in her sixth pregnancy. All save one of her five previous labors, which were protracted and exhausting, were instrumental deliveries. I placed her upon a course of preparatory treatment, as advised by Ellingwood, during the last three months of gestation.

During the last month, I gave strychnine sulphate, 1-30 grain, three times a day. In

due time, labor came on and I was summoned at 2 o'clock a. m. I found the patient sitting by the fire in comparative comfort, pains recurring about every ten minutes. This condition prevailed until 5 a. m. when contractions became stronger and more frequent. Examination at this time revealed the os well dilated, vertex presenting, and tissues soft and yielding. Pains were rapidly growing intense. I gave chloroform by inhalation, which made the pains bearable. At 6 a. m., a girl baby was born, the mother having been in hard labor not more than one hour. I attribute this easy labor to the course pursued during the last months of pregnancy. So far little more was to be desired. Convalescence set in and all went well until the tenth day, when the patient was seized with a violent chill, which recurred at intervals for some hours.

I gave atropine hypodermically and administered hot capsicum-tea. These measures finally controlled the rigors. The uterus was irrigated with hot boric-acid solution and hot magnesium-sulphate compresses over the abdomen, also hot antiseptic vaginal douches were ordered. The patient was placed upon Lloyd's echafolta, 15 drops, increased to 30 drops every two hours, as the dominant remedy, to combat the infection. Quinine sulphate, sodium salicylate, tincture of chloride of iron, specific medicines of respectively, aconite, bryonia, cactus, and others, were used to meet special indications. But, nothing seemed to be of the slightest avail and death ensued ten days after the initial chill. Antistreptococcus serum was obtained too late for administration.

The surprising feature of this case is the fact that infection did not set up until ten days after delivery. I heard that the woman told a neighbor that she would not have been in that condition if her husband had behaved decently. Inference as to the cause is clear.

The second case was that of a primipara, aged 19. Three days after delivery, the patient complained of chilliness and other evidences of beginning infection. Temperature 102° F., with corresponding pulse rate. I gave her an initial cleanout with calomel followed by an effervescent saline laxative, and then placed her upon the combined sulphocarbolates, 5 grains, calcium sulphide, ½ grain, and echafolta, 20 drops,

every two hours. For the fever, I gave the defervescent compound granule, quinine sulphate, and sodium salicylate. Specific medicine of cactus was prescribed, to strengthen the wavering heart. Hot magnesium-sulphate compresses and hot antiseptic vaginal douches were ordered; the latter thrice daily. The condition of the patient gradually growing worse, a consultant was called. He came, made an examination, but, suggested nothing that had not already been done—pocketed a fee of twenty-five dollars and went away. A second consultant was called and the uterus curetted, but, the patient succumbed twenty-four hours later. Antistreptococcus serum was suggested in this case, but, neither consultant had ever employed it and did not seem to think much of it.

Now, what is the comment? Was echinacea employed in sufficient dosage? Notwithstanding the lamentable outcome in these cases, my faith in echinacea in septic conditions has not been shaken. I shall continue to use it and shall try it out at the next opportunity.

Only recently, I was called to a case, that of a girl of 19 who presented typical symptoms of typhoid infection—chilly sensations, headache, boneache, anorexia, typhoid tongue, no-bleed, stepladder temperature and so forth. I cleaned out the intestine with calomel, $\frac{1}{2}$ grain, every hour, for six doses, followed by a laxative saline, and ordered the combined sulphocarbolates, 5 grains and echafolta in 15-drop doses every two hours. One ounce of hydrogen peroxide in quart of cool water was provided and, a glassful directed to be taken at intervals, the whole to be consumed in twenty-four hours. A colonic flushing with physiologic salt solution, to which was added 20 drops of carbolic acid and one-half teaspoonful of oil of turpentine, also was ordered. In three days, the temperature came down to 90° F., and in ten days the patient was dismissed convalescent. What part the echinacea played in this gratifying result I can not say, but, I am persuaded it contributed its bit. I shall use it again in my next case of typhoid infection.

J. Luther Sheppe.

Red Sulphur Springs, W. Va.

[Personally, the present writer has not much use for echinacea in cases of puerperal septicemia. Indeed, he has not seen

any cases of this sort for many years. He is under the impression, however, that this condition constitutes too severe a septicemia to be readily amenable to echinacea or other systemic antiseptics unless in very large dosage. It might be that much larger amounts of the echafolta would have given better results.

In cases of puerperal septicemia, the organism is overwhelmed so markedly by the streptococcus responsible that it is all but impossible for sufficient antibodies to develop for overcoming the toxicosis. Here, then, there would be an indication for an immune-serum, as distinguished from a bacterin. You remember that the immune-serum contains the specific antibodies immediately available. By injecting these in the affected organism, a proportional amount of toxin would be neutralized, when the body would be given a chance to develop a resistance to the infection. There is no time to fool with bacterins, because it required from five to ten days for the antibodies to form in response to the bacterin stimulation. Hence, the advisability of an immune-serum; that is, passive immunization rather than active.

For local treatment, douching with chlorazene solution or intermittent irrigation according to the Carrel method undoubtedly would have encouraged drainage and might have served well. It is even thinkable that chlorazene in proper dilution injected into the blood stream—intravenously—might have aided in overcoming the bacteremia.

Of course, *post-hoc* argumentation is easy. Yet, it is from our failures that we sometimes learn the most valuable lessons. Some of them the writer has ventured to indicate for your consideration.—Ed.]

WAR SLANG: "PIU-PIU"

In answer to your question on page 465 as to the why for the reduplication in the French term "piu-piu," I want to point out that the Italian habit of speaking with great vivacity leads, naturally, to a repetition, a feature which surprises us western or northern people. Piu-piu means, simply, "more". To express the idea that a person has beautiful black eyes, the Italian is not satisfied with *belli occhi neri*, but, he says,

belli occhi neri neri. I once heard an Italian repeat *piu* six times in succession, to emphasize the fact that he could not get enough of a good thing.

E. H. F. PIRKNER,

Atlanta, Ga.

THE RESOURCEFUL AMERICAN DOCTOR

In the February number of your journal (p. 156), you printed a letter from Doctor Carreño, of Mexico, in which he describes



Two North Carolina Mountaineers As They Reported for Military Service. (See Editorial Article on page 807.)

his method of treating phagedenic ulcers with a dressing of powdered charcoal. The letter interested me, because some thirty years ago I used the same treatment, in combination with other ingredients.

I had, at that time, a good many colored patients, wished on me by the dear ladies of various benevolent societies. Of course, they were all charity-patients and most of them lived in that part of the town aptly dubbed Poverty Hollow. A great many of them were typical southern darkies—lazy, shiftless, and subject to some of the mal-

adies so often encountered among the Negroes of the South, as also among inhabitants of the tropics and the Orient.

I had several cases of that not very common manifestation called "spontaneous gangrene" where a finger or toe would slough off, literally drop off; and, of course, phagedenic ulcers were plentiful.

For dressing them, I used a mixture of powdered charcoal and powdered calisaya-bark, with a 25-percent admixture of powdered roasted coffee. The results were as satisfactory as those reported by Doctor Carreño. And, the coffee, besides its deodorizing qualities, apparently acted as a good disinfectant and stimulator of fresh, healthy granulations.

In the days when iodoform was the great antiseptic, I used to destroy the odor of it



The Same Men After Four Months of Training. An Eloquent Argument in Favor of Universal Military Training.

on my hands by rubbing them with powdered coffee.

By the way, my practice in those days taught me a good many "ways of skinning a cat." My practice was in a country community. I was a newcomer, scantily endowed with the almighty dollar, and had to make my armamentarium of instruments

and appliances play a good many novel parts.

One Friday afternoon, just after luncheon, one of my colored friends from "Poverty Hollow" came racing to my office with his better half. The woman's mouth was wide open and she was in a fair way of choking. Her spouse said she had "done swallowed a big codfish-bone". Sure enough, there it sat, stuck in her throat, and, in trying to get it out, she only had jabbed it still deeper. No umbrella-probang or slim forceps long enough to reach it being in my outfit, I had make shift. So, an Otis dilator, opened up and then screwed together, yanked that bone out. How is that for inventive genius?

Years later, I have often thought of this incident and laughed, when, in the lap of instrument-luxury, I had all the latest doo-dads at my command.

C. L. STEENSEN.

New York, N. Y.

SOME FACTS ABOUT YEAST

The subject of yeast is of importance because, first—as has been pointed out in an editorial in *The Journal of the American Medical Association* (1916, LXVI, 1390) it possesses a distinct nutritive value and because, secondly, it possesses therapeutic virtues. The problem of the yeast treatment has recently received impetus as the result of the publication of an article by Dr. Philip B. Hawk and collaborators, (*Jour. Amer. Med. Assoc.*, Oct. 13, 1917) which represents work done in the laboratory of physiological chemistry of the Jefferson Medical College and of the Philadelphia General Hospital, both of Philadelphia, and of the Roosevelt Hospital at New York.

Hawk and his colleagues obtained strikingly good results from the use of yeast in many pathological conditions, especially the purulent skin conditions, such as acne and furunculosis, and also in constipation. That they did so, is not at all surprising, for, yeast has always acted well in these skin conditions, as is well known. Hawk mentions that yeast has been employed in medicine since the days of Hippocrates who used it in the treatment of leukorrhea. Not until the middle of the nineteenth century, however, was its use looked

upon favorably by the medical profession. Since then, the value of yeast has been attested to by numerous observers, who employed it in a variety of pathological conditions. Its value in certain skin conditions has been freely acknowledged by dermatologists, Schamberg, for instance, who has seen good results from its use in the treatment of ordinary furunculosis, although it failed him in the furunculosis accompanying smallpox.

Hawk's researches are novel, in that he employed as a therapeutic agent, not the time-honored brewers' yeast, but, the familiar Fleischmann's yeast of the bakeries and the household. This is the first time, it seems, that bakers' yeast has been employed systematically as a therapeutic agent, although Louvel (*Rev. Méd.*, 1905-6, fasc. 10, 16-19) seems to have used it in the treatment of sundry infectious diseases, and according to Cailliau (*"Thèse de Paris"*, 1908) it was employed in 1896, by De Backer, who mixed it with equal parts of white honey, and who considered it more active and better supported than ordinary yeast in the treatment of furunculosis.

That brewers' yeast should have been used in the past is not at all surprising, when we call to mind that, in all probability (just as in modern times), it was extensively used and experimented with by the employees of breweries, because so readily accessible. A special virtue seems to have been attached to brewers' yeast, probably for this very reason. Thus, for instance, the yeast specified by Schamberg is the fresh brewers' yeast, while the U. S. Pharmacopeia of 1876 defines yeast (fermentum) as "a peculiar insoluble product of the fermentation of malt-liquors." Yeast was dropped from the Pharmacopeia of 1880 and since then has remained unofficial. The "U. S. Dispensatory" of 1918 describes it as a "floculent, frothy, somewhat viscid semifluid of a dirty yellowish color, a sour, vinous odor, and a bitter taste." However, the appearance of brewers' yeast is not familiar to very many physicians, one reason being that it is not immediately available, except in some large cities. In country districts that are remote from breweries, the procurement of brewers' yeast is attended by serious difficulties.

"Compressed yeast" (the undried product) now is readily obtainable, and there

is no reason why it should not be largely used.

"The National Formulary" (1916), under the term "*cerevisiae fermentum compressum*", recognizes compressed yeast and describes it as follows: "The moist, living cells of *saccharomyces cerevisiae* Meyen (fam. *saccharomycetaceae*) or of other species of *saccharomyces* combined with a starchy or absorbent base. White or yellowish-white, soft and easily broken masses, having a characteristic slightly sour odor and not more than a faintly acid reaction to litmus. When examined under the microscope; numerous oidium and mycoderma cells and starch grains are visible. Compressed yeast must not be used unless fresh and free from mildew and musty odors." According to Sadtler ("Industrial Organic Chemistry," 1900), it should be only slightly moist, not sloppy to the touch; the color should be a creamy-white; when broken, it should show a fine fracture; when placed upon the tongue, it should melt readily in the mouth. It should have an odor of apples, not like that of cheese; it should not have an acid taste or odor.

Aside from its nonavailability, certain other objections to the use of fresh brewers' yeast readily come to mind, among them the fact that, as a rule, its decided lack of uniformity as to composition and action. This is readily understood when we recall that in the yeast of the breweries two well-marked varieties of *saccharomyces* have been recognized: a top yeast, most active at between 16° and 20° C., and a bottom yeast, most active at between 6° and 8° C.

On the different behavior of these varieties, different methods of brewing have been founded. Lardier ("*Thèse de Paris*," 1901-1902) calls attention to the fact that brewers' yeasts obtained from different breweries behave differently so far as therapeutic action is concerned; moreover, that the therapeutic action of yeasts obtained from different lots produced in the same brewery will vary. Also, the yeast in the same barrel varies at different

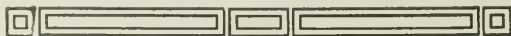
stages of fermentation. He states that this difference explains in part the varying therapeutic results obtained by different observers.

Besides varying in the proportion of the different species of *saccharomyces* which they contain, brewers' yeasts are prone to be contaminated with various wild yeasts that have entered from the air.

There is a difference of opinion concerning the nature of the constituent of the yeast that gives it therapeutic value. Some investigators claim for it a direct bactericidal effect; others regard the effect as due to byproducts of fermentation, such as alcohol and various acids; still others regard the action a result of the chemotactic influence of the high nuclein-content of the yeast. According to the "Dispensatory", the experiments of Walzou and Lacharow have shown that yeast increases the opsonic index of dogs for staphylococci and streptococci. This may help to explain its favorable action in infectious conditions.

The "Dispensatory" mentions the fact that the ordinary yeast cake of American bakers may well be substituted for brewers' yeast. In view of Mr. Hawk's investigations, this statement may very well be true. Compressed yeast generally is to be preferred because of the fact that it is carefully standardized and a uniform product is always obtainable.

Sadtler refers to the researches of Hansen, who early separated various species of yeast used in the industries. Among these varieties of *saccharomyces cerevisiae* and *saccharomyces pastorianus* were used in the brewing of beer, and *saccharomyces ellipsoideus*, in the manufacture of wine. Sadtler states that it is prepared as compressed yeast in the form of cakes generally with the addition of potato-starch. The "National Formulary" does permit the presence of any species of *saccharomycetaceae* other than that of *saccharomyces cerevisiae* Meyen. At all events, the composition of bakers' yeast can be controlled, and this product possesses the advantages of availability and uniformity.



In the World War

LETTERS FROM FRANCE—IV

Wouldn't it make you a trifle irritable if, after passing five months at the front, you stole a ride on a French cattle-car to get to a town twenty-five miles back of the lines, so that you could have a quiet night's rest, and then had your bedroom ventilated by machine-gun bullets, while a bomb from a Boche aeroplane blew you and your bed out into the hall as a sort of grand finale? Joseph T. McInerney, of Lynn, Massachusetts, who had all the above-mentioned things happen to him, admits that it did make him somewhat peevish; in fact, McInerney declares that he and the Kaiser are positively on the outs since the night that his slumbers were interfered with in such an unseemly manner.

If the draft-age is going to be raised to the forty-fifth year, it won't even hint at McInerney; so, after five days with a division as a K. of C. secretary during the drive, he was not as fit as the soldiers and he just had to have a night's sleep. Thus, in pursuance of this conviction, he hoofed it back to a railroad line, boarded one of the dinky French freighters as it lumbered past and engaged a first-class seat on some straw in a cattle-car. When the train arrived at a town twenty-five miles back of the lines, McInerney jumped off and wended his way to a hotel, secured a bedroom, and took possession, firmly determined to snooze for twenty-four hours at least. However, as is well known, the best-laid plans . . . !

Around about 10 o'clock that night, two gentle German aeroplanes came floating over that selfsame little town. McInerney swears the aerial visitors must have known just where his room was located, for, they forthwith "torpedoed it without any warning". A burst of machine-gun bullets buzzed all around him and let in the night-air through a disagreeable number of sections of the wall, and then, the while Mac was struggling to get out of the bed-clothes, a bomb relieved him of the trouble by blowing away the entire wall, simul-

taneously tossing the bed and its bewildered and sleep-drunk occupant into the front hall. To enliven things a bit more, a second bomb landed on the roof and completed the nocturnal job, so that the Boche pilots were able to go back and report another French "munition-plant" destroyed. Hereafter, when McInerney thinks of passing a quiet night, he vows he's going to apply for an assignment at the front with a trench-mortar battery.

Mr. Walter Hayes, for five years the private secretary of President Roosevelt, is one of the latest recruits to the ranks of Knights of Columbus workers in France. Mr. Hayes has been assigned to work in the headquarters of the K. of C. in Paris.

The development in the work of the medical corps of the American Army in France within the last few months is marvelous. The perfection of the hospital-system, the skill of the surgeons, and the alacrity with which the wounded are handled and borne from the battlefields to the hospitals are points to be noted. The mothers at home may be assured that the American soldiers have just as competent medical and surgical attention in the shadow of the battle-line as in any hospital in America.

Hospitals have sprung up everywhere and have grown almost beyond recognition. The base hospital where the Johns Hopkins unit is located had made wonderful growth. It came over with the first American troops in June, 1917, and, in July, was, with the exception of a hospital established at a French port, the first base hospital to be in running order. In March, it held 800 patients, and barracks were then in construction for 5,000 beds. That was then considered an extensive scheme. Today, 7,000 beds are ready, and there are 3,000 patients in this hospital. More barracks are being built, and soon there will be 14,000 beds. Besides the Johns Hopkins Unit, three other units have been added recently—the Maryland unit and the



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French Hospital at the Front.

two army units, while three more are expected.

The hospital presents a picturesque appearance from a distance, with its hundreds of barracks covering a valley and the sides of the hills. All through the district where the American camps are located, from the line of battle straight back to southern France, hospitals have sprung up almost by magic. Many of them are temporary structures, composed of barracks and tents, still, all are most comfortable, in excellent running order, and in perfect sanitary condition.

The Roosevelt Hospital is another of the big base hospitals that have increased their work recently, its capacity having been enlarged to 26,000 beds. Many of the patients have come from the July battle, and I have talked to some that had been wounded on July 21. All were in the best of spirits and proud of their share in maintaining the pace that the Marines set in July.

Mr. Quentin Todd, who is attached to the Wynne-Bevan Ambulance on the Italian front, has been decorated by the Italian

government for his bravery under fire during a severe attack recently, when the entire ambulance distinguished itself. This is his third medal for bravery. A letter just received from Mr. Todd by a friend in Paris states that the Wynne-Bevan Ambulance was decorated by the king of Italy, on July 24, at a big review. The king presented the medals personally to the corps of ambulance-drivers, of which Mr. Todd is a member, and the other personnel of the organization, and spoke a few words to each. The ambulance now has the highest military decorations for valor that it is possible to win. Mr. Todd was also awarded the Order of Merit by Colonel Tuseni, the head of the department of ambulance drivers of the Red Cross. Mrs. Wynne and Captain Bevan had previously received this decoration. Other Americans of the Ambulance Corps that were decorated are: Mr. Evarts Scudder, Mr. Sterling McKittrick, and Mr. Rexford Harrower.

Working all night with their gas-masks on, under shell-fire, showing the greatest disregard for danger and handling in a



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In a Training Camp of Our Hospital Division.

comparatively short period 1,286 wounded, American Red Cross ambulance section S. S. 101 yet found time to help a British ambulance evacuate gas-cases. The section, consisting of twenty ambulances, a staff-car, a camion, and a kitchen, arrived at — on July 20 and remained at the front during all the recent fighting. Holes shot through the cars, their chassis rent by shell, and damaged generally give evidence that the men were in the thick of it. In one instance, a chauffeur found himself holding only the wheel of his steering apparatus. A shell had scattered the other part to the four winds. Lieutenant E. A. Fish, who was in charge of the section, in his report to Major C. G. Osborne, director of transportation, pays tribute to the men for their spirit of self-sacrifice and devotion. Lieutenant-Colonel Percival, of the Royal Army Medical Corps, in a letter to Lieutenant Fish, also expressed his gratitude for the work of the section in aiding the British ambulance. Lieutenant Fish adds in his report that 721 sitting-cases and 565 lying-down cases were transported by his section between July 21 and 27. He pays a tribute to L. L. Wenham, who, after his car had been struck, took

the car of another man, who had collapsed, and worked both posts.

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In a tiny village about 10 kilometers from the firing-line, the American Red Cross conducts a dressing-station in a church 400 years old. The scenes here on busy nights were picturesque and weird. On one occasion, I saw more than 100 Americans and Germans lying on blankets on the floor under the shadow of the altar, which was lighted by candles, and the rays flickering over the saintly statues and falling upon the faces of the soldiers presented a weird picture of war.

In a niche in the wall that once had been the abode of a saint, a swallow was sitting on her nest. Soldiers bearing cots constantly passed within a foot of this conscientious bird, but, she seemed unafraid, and the soldiers were as solicitous of her as they were of the wounded men they were caring for. This bird built her nest while the Americans were in the church. No one bothered her. The doctors and the internes watched the proceeding with deep interest. The bird laid four eggs and hatched them. It was understood that the first man who handled

the eggs would be courtmartialled. One day the nest was filled with four infant swallows. Day after day the hospital-attendants and the soldiers that were constantly coming in for slight wounds or trivial ailments watched the mother-swallow come and go on her never ceasing errands of feeding her brood. At last, the little ones hopped to the floor. They made their way outside and have not been seen again. The mother-swallow returned a few times, fluttering about the church, as if to pay her respects to the men who had been so thoughtful of her, and at last stayed away for good.

Many unusual things are to be seen by anyone who journeys about close to the firing-line. Residents of the villages that are closest to the line moved out long ago, but, in some places, three and four miles in the rear, a region within easy reach of the enemy guns, many women, elderly and aged, and men and children may be seen. One day, I saw three children—two boys and a girl, none more than ten years old—walking along with gas-masks hanging over their shoulders. They were in a zone where no soldier is permitted to be without a mask ready for use.

In a little farm colony, a middle-aged woman refuses to move. She owns the colony. I saw her working in a pansy-bed when shells were whistling over her head. She paid no attention to them. On another occasion, shells were falling in a small place where the Germans apparently thought an American headquarter was established. I was on a road about 1,000 feet from the town and could hear the shells whistle over head every minute. Between the road and the town, were four little children picking peas. Shells meant nothing in their tender lives. They have heard them time and time again.

The Y. M. C. A. is now operating about 1,200 huts in France for the American and French forces. The American section, which works entirely with the United States army and navy, has approximately 550 huts open. This includes all points of contact, such as rented buildings, tents, dug-

outs, and 125 especially constructed buildings. The *Foyer du Soldat*, which is the Y. M. C. A. branch operating with the French army, has an even larger number of huts, about 650, according to the latest figures available. The Foyer has established 831 in the course of its existence, but, it has lost many through enemy gunfire or the necessity of yielding ground at various points. Almost all of the Foyers are substantial buildings, equipped with refreshment-stand, writing-room, and amusement-facilities.

You would not believe it, seeing them sometimes, but, keeping clean is one of the main aims in life among Pershing's men in France. No one ever misses a chance to bathe, and there is many a soldier who insists that, when he returns home, he will be able to get a job anywhere as a laundress. In every marching-kit, you will find a piece of soap. And in every brook, creek or river in the vicinity of a body of troops you will see men "laving" themselves or beating the dirt out of a shirt, a pair of socks or some more unmentionable article of wearing-apparel. In the courtyard of the chateau that the Y. M. C. A. is using as headquarters at Chateau-Thierry, hundreds of soldiers have scrubbed down under the fountain and wished there were similar ready-made shower-baths all over the fighting-front.

Thousands of bars of soap go over the counters at Y. M. C. A. canteens weekly. For delivery in the next three months, the Red Triangle has contracted for 1,800,000 bars of the stuff that discourages dirt and fleas and makes the French wonder why Americans use so much of it. Most of this soap is for toilet-purposes only. The rest is for washing clothes and equipment. Some will be scented in the true French style and some will smell like plain soap. The price for all of it will be at rock-bottom, and the soldier who goes dirty for any length of time will be doing so from a general disinclination to use a little elbow-grease to bring his soap and the hard water of France into cleansing cooperation.

B. SHERWOOD-DUNN.

Paris, France.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

(Continued from October issue, page 870.)

INSIST again that it is impossible to grapple successfully with venereal disease, unless we consent, not, to introduce our prejudices into the question, but, to treat it purely and simply as a sanitary question. And, if the pseudo-moralist still has difficulty in cooperating toward the healing of the social sore, he may be reminded that he himself—like everyone of us, little though we know it—has certainly had a vast army of syphilitic and gonorrheal persons among his own ancestors during the past four centuries.

In referring to better economic conditions, I repeat: It were as idle to eliminate Prostitution as to extirpate Poverty and Greed. Just as long as Lust runs riot in the veins of men, women will be degraded and debauched. Just as long as Want and Wretchedness stalk like grisly phantoms through the earth, women will be found who will brazenly barter their souls for gold or for bread. There are women who are wantons by nature; whom no wealth, education or moral surroundings can withhold from evil; yet, economic conditions have a greater influence in keeping this evil alive than many people imagine.

Among those conditions contributory to this evil are, low wages, insanitary conditions, demoralizing relationships in stores, shops, domestic service, restaurants, and hotels; the street vending of children in selling papers and gum, collecting coupons and refuse; the messenger service of boys, especially in the vicinity of disorderly houses, vicious saloons, dance-halls, and other demoralizing resorts; employment agencies which send servants to immoral places; too long hours and high pressure of work; the overcrowding of houses upon lots, of families in the house, and of persons in single rooms.

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In closing, I may say, it is useless to talk of "reforming" women who never possessed the faintest conception of modesty; in

whom the brutish nature dominates the divine; but, these form a very inconsiderable portion of that great army upon whose brows blazes the scarlet brand of the courtesan. A vast majority of these unfortunates feel their degradation as no malefactor ever felt his disgrace; would, were it possible, wash the stains from their souls with their heart's blood. Every year of the world, thousands of them, unable further to bear their weight of shame, longer to endure the fierce scourgings of an avenging conscience, burst the gates of death, hide in the grave from a cold world's bitter scorn. Other escape there is none; society will not receive them back; its doors are irrevocably closed to them. They may knock, but, it will not be opened to them; they may come on their knees, groping their way through penitential tears, but, they will be spurned from its portals with foul reproach. Society made them what they are; yet, it now sits in judgment upon them and declares that they shall be no other. From the lips of the stern judge, are never heard those words, the sweetest that ever fell on mortal ears, divinest sentence that ever passed the lips of God and man, "Go and sin no more." Others reform. The thief becomes an honest man, the forger lives down his crime, the manslayer purifies his bloody hands with a lifetime of noble deeds; but, once a courtesan, always a courtesan. There is no place in all the wide world but the bagnio for the woman who once has erred—no matter how youthful or inexperienced she was or how foul her betrayal.

To the world, ever gross despite centuries of civilization, all women found even one step outside the prescribed path are equally vile, alike deserving unmitigated censure; yet, from the highest to the lowest of those so outlawed and placed beneath society's ban, is a sweep as far as from the highest heaven to the deepest hell. With some women, Love is a law, before which canons of Church and State shrivel into nothingness. No saintly anathema, no fiat of so-

ciety can disturb their devotion. Society has no power over them for good or ill. From its infallible judgment, they calmly and confidently appeal to an infallible God.

For those at the other extreme, the law of whose lives is Lust instead of Love, children of the slums, the spawn of criminals who were prostitutes from the very cradle, there is no hope. There is no method by which those now existent can be successfully reached. All that we can hope to do is, by improving society, to curtail the class which breeds them. This can not be done by dogmatizing or founding "homes for fallen women"; we must do our most effective work in our industrial system.

It is that vast class of women, once pure, but, now foul, yet, who still retain a shadow of that "divine shame" which distinguishes humanity from the brute, and who long to return to the upper world—to win back the respect they have forfeited—that chiefly concerns us. Naturally, the first step would be, so to reform society that it will not, year by year, pour thousands of fresh recruits into the ranks of the fallen. Here, too, the need of industrial reform becomes apparent. Bitter poverty is as potent to make prostitutes of young women as thieves of young men. Make it possible for every young woman to earn an honest and respectable living, and you make it possible for thousands of young women to choose aright between good and evil, when their only alternative to degradation now is death. You prepare a field in which it is possible for moral maxims to take root. It is useless to hurl homilies at people suffering for food and fuel, while the devil is clinking his gold pieces and dazzling their eyes with gems.

What is it that is railroading so large a portion of the young women to hell? What strange phantasy is it that leads so many wives to sacrifice the honor of their husbands and shame their children? Is it evil inherent in the daughters of Eve, themselves? Is it lawless lust or force of circumstances that adds legion after legion to the cohorts of shame? Or has our boasted progress brought with it a suspicion that female chastity is, after all, an overprized bauble—that what is no crime against nature should be tolerated by this eminently practical age? Time was when a woman branded as a bawd hid her face for shame

or consorted only with her kind; now, if she can but become sufficiently notorious, she goes upon the stage, and men take their wives and daughters to see her play "Camille" and kindred characters. This may signify much; among other things, that the courtesan is creeping into social favor—even that a new code of morals is now abuilding, in which she will be the grand exemplar. It is not so much the number of professed prostitutes that alarms the student of sociology, as the brutal indifference to even the semblance of sexual purity which is taking possession of our social aristocracy, and which poison, percolating through the underlying strata, threatens to eliminate womanly continence from the world.

If, despite all our safeguards of law and the restraining force of religion, society becomes more corrupt; if, with our boasted progress in education and the arts, women of alleged respectability grow less chary of their charms—if the necessities of poverty and the luxury of wealth alike increase the number of brazen bawds and cultured mistresses—it is a fair inference that there is something radically wrong with our social system.

Prostitution increases in direct proportion as the general social conditions and the economical situation are unfavorable to marriage, and it decreases as marriage is facilitated. So long as a business man is able to make a million a year net profit, while of his employees scarcely two or three are so paid that they can think of marriage before the age of thirty; so long as an employer will refuse a female employee a raise of salary with a gallant reference to the ease with which—with her advantages of appearances—she might increase her income; so long will the marriage question, as well as that of prostitution, remain unsolved.

So long as the present low rates of pay and uncertain conditions of employment continue, the blood of men will continue more and more to be corrupted and that of women be impoverished, while waiting for the marriage which might have checked the social evil and given to society excellent children born of healthy and happy parents.

So long as societies thus fatuously sacrifice their highest values, will every other kind of social reform be nothing but a work of Penelope, of which the night will undo what the day has done.

Among the Books

STITT: "BACTERIOLOGY"

Practical Bacteriology, Blood-Work, and Animal Parasitology. Including Bacteriological Keys, Zoological Tables, and Explanatory Clinical Notes. By E. R. Stitt, M. D. Fifth edition, revised and enlarged. With 1 plate and 144 other illustrations containing 598 figures. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$2.00.

The fifth edition of Stitt's "Bacteriology" needs nothing further than a mere announcement. This volume has been a faithful guide to many physicians and laboratory-workers for years. It is one of the most valuable books of its kind, for the simple reason that the author not only is an unusually efficient and successful teacher, but, also, has the enviable ability of presenting the subject in a clear and interesting manner.

WARBASSE: "SURGICAL TREATMENT"

Surgical Treatment: A Practical Treatise on the Therapy of Surgical Diseases, for the Use of Practitioners and Students of Surgery. By James Peter Warbasse, M. D. With 2,400 illustrations. Philadelphia: The W. B. Saunders Company. 1918. Complete in 3 volumes and an index volume. Price \$30.00.

The first volume of the contemplated 3 volumes is a handsome book of 947 pages, including 47 pages of index, and contains the considerations of general subjects, such as sepsis and antiseptics, surgical materials, anesthetics, wounds and operations, inflammations, surgical fevers, and so on. Also, it contains general discussions on fractures, dislocations, and diseases of the joints, of muscles, tendons, and nerves.

Doctor Warbasse has included in his discussions the latest methods proposed for wound treatment. Thus, we find, for instance, paragraphs on the hypochlorite of magnesium, on dichloramine, chlorinated oil, magnesium sulphate, et cetera. The subject of syphilis as a surgical infection

has received detailed attention. Altogether the first volume of Warbasse's "Treatment" promises well for the value of the work and it can be heartily recommended.

MAYER: "GUNSHOT INJURIES"

The Orthopedic Treatment of Gunshot Injuries. By Leo Mayer, M. D., with an Introduction by Col. E. G. Brackett, M. D. Illustrated. Philadelphia: The W. B. Saunders Company. 1918. Price \$2.50.

This little volume is dedicated to all who by word and deed are striving to aid the cause of the crippled soldiers. The author insists, justly, upon the necessity of early radical methods for ultimate conservative results and for the final completion of full function. There are few problems confronting us that are more important than the treatment of rehabilitation of those injured in war-service. There are few subjects even approaching it in difficulty, but, likewise, few that are so promising of splendid results.

MAY: "DISEASES OF THE EYE"

Manual of the Diseases of the Eye: For Students and General Practitioners. By Charles H. May, M. D. With 377 original illustrations, including 22 plates, with 71 colored figures. Ninth edition, revised. New York: William Wood & Co. 1917. Price \$2.50.

If anything more were needed to demonstrate the value of a book, the enormous demand for May's manual would seem to suffice. The present is the ninth edition issued in America since August, 1900. In addition, there have been ten reprints here and twenty editions, with one reprint, in foreign lands. Germany, Italy, Great Britain, France, Netherlands, Spain, and Japan have thus testified to their appreciation of this work, and we are informed that a translation into Chinese is now being made.

Looking through the book, we would say that this popularity is fully justified. It is an admirable manual for students and gen-

eral practitioners. In its 440 pages, there are 377 original illustrations, including 22 plates, with 71 colored figures. The language is simple, clear, and readily understood. The directions for various examinations are so plainly put as to be easily comprehended. The procedures recommended are well chosen. The author's drug-therapeutics, even, is comparatively up to date, although he is a specialist on a part of the body peculiarly open to operative intervention. He is not a drug-nihilist, by any means. He even is aware of the services obtainable from calcium sulphide. And that fact so fully illustrates our encomiums that we let it go at that.

CARMAN AND MILLER: "ROENTGEN DIAGNOSIS"

- The Roentgen Diagnosis of Diseases of the Alimentary Canal. By Russell D. Carman, M. D., and Albert Miller, M. D. With 504 Original Illustrations. Philadelphia: The W. B. Saunders Company. 1917. Price \$7.50.

The reviewer of this work throws up his hands and begs for mercy. He can not review this book; he does not want to review it. That is, he is unwilling to give it the cursory examination often accorded a book; reading the preface, glancing at random through a few pages, picking out some one item with which he is personally familiar, judging the book by the writer's treatment of that item, saying a few complimentary things, and letting it go at that.

We have here a magnificent volume of 558 pages and more than 500 original illustrations coming from the hands of two of the specialists in the great Mayo institution. We want to read and study this volume from beginning to end. For—make no mistake—that institution is revolutionizing the whole science and art of medicine. The old methods of teaching, together with our cherished textbooks, are going into the discard, to be replaced by the enormously improved methods being developed in the Minnesota town of Rochester. Doctor, you might as well dispose of your medical library to the junkman and start in at once, so as to be in line with this new work.

One thing puzzles us—these are war times: economy is supposed to be universal and paper so scarce that there is talk of the government compelling a reduction in

the size of the periodicals of the day. And, yet, we have never known medical books of such perfection as to their fabrication as the lot now occupying our table. The type used is extra large, the spacing and margins wide, and the highly calendered pure-white paper nearly as thick as cardboard. Where do they get it, and how can they afford it!

W. F. W.

TODD: "CLINICAL DIAGNOSIS"

Clinical Diagnosis: A Manual of Laboratory Methods. By James Campbell Todd, M. D. Illustrated. Fourth edition, revised and reset. Philadelphia: The W. B. Saunders Company. 1918. Price \$3.00.

When the Ninth International Medical Congress first was organized, but one place was assigned to the entire medical profession west of the Atlantic slope; while to the members of the faculty of the University of Pennsylvania no less than thirty posts were assigned. There certainly has been a change. Here we have a work from the laboratories of the University of Colorado, and, more, it is the fourth edition, in addition to three reprints, issued since its first appearance in 1908. This fact really seems to render an extended review unnecessary. So far as we have examined it, we have found nothing to condemn, but, on the contrary, much to explain its proven popularity. One point, however, we must call attention to. The examination of the feces is limited to but 25 small pages, and only 8 of these are devoted to the microscopic examination. We venture the prediction that in the near future very much more attention will be given to this department, with correspondingly valuable results.

GRAVES: "GYNECOLOGY"

Gynecology. By William P. Graves, M. D. With 368 Halftone and Pen Drawings by the Author and 123 Microscopic Drawings by Margaret Conree and Ruth Huestis, 100 of the Illustrations being in Colors. Second edition, thoroughly revised. Philadelphia: The W. B. Saunders Company. 1918. Price \$7.75.

The second edition of Graves's "Gynecology"—which really is a third issue, since the first edition was reprinted last year—

has been brought up to date as nearly as was possible. A notable addition consists in the section on the relation between the practice of gynecology and the use of the internal secretions. There also are interesting chapters on ovarian transplantation, on the radium-treatment of cancer and of nonmalignant gynecologic diseases. A new section has been introduced which deals with the relationship of gynecology to the sex-impulse, as based, chiefly, upon the theories of Freud regarding infant-sexuality. We can not agree with the author, however, when he assumes that these theories are now generally accepted.

The work is divided into three parts, the first dealing with the physiology of the pelvic organs and their relationship to the general organism. This latter is of particular importance. The second part contains descriptions of those diseases that are naturally gynecologic. The third part is devoted to the technic of gynecologic surgery.

THE STRATFORD UNIVERSAL LIBRARY

"Lazarus," by Andreyev, and "The Gentleman from San Francisco," by Bunin, and (2) "Tales from Boccaccio," are two volumes that recently have been submitted to the Reviewer. They are published by The Stratford Company, Boston, Massachusetts, at 25 cents a volume.

While most of us are familiar with the "Tales from Boccaccio," we shall enjoy the rereading of this attractive selection, which contains, notably, the famous "Story of the Three Rings" and also the "Story of Griselda." Entirely different are the two stories in the first volume mentioned. The biblical account of the raising of Lazarus from the dead leaves him restored to his family, the whole countryside rejoicing in the miracle that had been wrought by the Prophet of Nazareth. The Russian novelist Andreyev, with a curiosity that must be called morbid, now inquires into what happened to Lazarus during those three days that his body lay with the dead. What did he see? What were his experiences? Naturally enough, the author does not attempt to answer the question himself, but, he lets the reader infer certain awful and gruesome experiences, by relating that the formerly good

and joyous Lazarus never again laughed or even smiled; that there was something so terribly haunting in his expression that his family left him and that his friends forsook him, leaving him to live out his existence alone. While the story is told morbidly, it is not without interest.

In "The Gentleman From San Francisco," by Bunin, the impotence of power and the poverty of self against the leveling effect of death are graphically described.

HESS: "INFANT FEEDING"

Principles and Practice of Infant Feeding. By Julius H. Hess. Illustrated. Philadelphia: The F. A. Davis Company. 1918. Price \$2.00.

Here is a volume contributed by a Chicago specialist who is now at the front. Doctor Hess has given us a very good manual on this most-important topic. There are some points, though, which we feel constrained to criticize and which lead us to infer that the work was prepared some years ago. Thus, the vitamins are not mentioned, although their enormous importance has been fully demonstrated. Quite recently, the administration of raw white of egg has been sharply questioned, it being asserted that it contains a toxin that is not safe when freely administered to an infant. Then, as regards the commercial infant foods, we are not ready to agree with Doctor Hess in his preference of those that contain only a trace of fat. Also, his drug-treatment is not very effective and shows evidences of the prevailing pessimism in the respect.

NEGLEY: "POEMS WITH A PUNCH"

Poems with a Punch For Patriotic People. Published by H. E. Negley. Author and Compiler. Indianapolis, Ind. 1918. Price \$.50.

Here is a little book of poems by the author of "Back to the Light" which we were permitted to print in the September issue of *CLINICAL MEDICINE*. These poems are all patriotic and refer more or less immediately to the war. They are dictated by a great love of country, of justice and right, and humanity, and they manifest a corresponding hatred of brutality, deceit and other latter-day evidences of kultur.

Some of them are charming, others are pathetic; still others make you smile. The little volume will make a splendid present to a soldier and to soldiers' libraries.

"PROGRESSIVE MEDICINE"

The third (September) number of *Progressive Medicine* for 1918 is before us and contains the customary abstracts of interesting and important articles that have appeared in current medical literature. On cursory examination, our attention is attracted by an article on vegetable foods for the diabetic which will be of interest to many physicians. Gassing has occupied various authors as has also blood transfusion. In the department of obstetrics, the relation of the glands of internal secretions to obstetrics again has received attention. The Abderhalden test seems to have stimulated further research; at any rate, we note an article on the diagnosis of pregnancy by chemical examination of the blood.

Altogether, *Progressive Medicine* is a useful source of information to the physician. It is edited by Dr. Hobart Amory Hare and Dr. Leighton F. Appleman, and published quarterly by Lea and Febiger, Philadelphia and New York, the subscription price being \$6.00 per annum.

ROBINSON: "SEXUAL DISORDERS"

A Practical Treatise on the Causes, Symptoms, and Treatment of Sexual Impotence and other sexual disorders in men and women. By William J. Robinson, M. D. Eighth edition, revised and enlarged. New York: Critic and Guide Company. 1918. Price \$4.00.

While the author enumerates over thirty possible causes of sexual impotence in the male, he evidently is convinced of the relatively great importance, in this respect, of masturbation and of pollutions and spermatorrhea, since he devotes to these two subjects each a separate part in his detailed discussion. Regarding masturbation, the author must be credited with sane and truly conservative opinions. Far from condemning this widespread habit as "sinful" or vicious, on the one hand, or of denying (as some recent writers have done) an inherent harmfulness, he places the evil in

its proper place as a habit that may be productive of much and serious injury if it is indulged in in too great a degree or for too long a time. Fortunately, most people give up the habit sooner or later. As to its prevalence in girls and women, the author denies its alleged great frequency, believing it to be not more than about twenty-five percent; although, in boys and men it is much greater. In one point, the author is at variance with most modern writers; namely, he believes that, in certain extreme cases, masturbation *may* have been responsible for locomotor ataxia and for insanity; at least, in several cases of the former affliction no other etiological factor could be ascertained.

The considerations on masturbation occupy barely one-fourth of the text of this little volume. The entire book is written in a highly commendable manner, free from excessive verbiage or foolish preachments; and equally devoid of silly, mawkish moral precepts. The morals taught by the author are those of good sense. And, the same is true of his treatment outlined for the various sexual disorders of men and women. It must also be mentioned that the prurient-minded will find nothing in this book to satisfy their salaciousness. The language is altogether too straight-forward and too free from hidden meanings; not an easy thing to have accomplished in a book of this kind. Physicians should study it carefully. A full knowledge of the topic is sadly needed by most practitioners; and they should be able to teach their patients correctly and sensibly.

MARIE: "MEDICAL VOCABULARY"

English, French, Italian Medical Vocabulary. By Joseph Marie. Philadelphia: The P. Blakiston's Son & Co. 1918. Price 50 cents.

This is a handy little volume that easily slips into the pocket and contains a great many words, with their French and Italian equivalents, that may be needed by medical officers. The selection of words is good and the correctness of the translation may be taken for granted. Indeed, we have been unable to find any instance in which we would differ with the author's interpretation. The little volume will be very useful to medical officers.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

Referring to Question 6396, the editor, in his comment, offers to send to the correspondent a reprint of his article on the treatment of epilepsy. If he has a copy to spare, I should thank him for one, too.

"Nervous collapse" is, of course, a most

unsatisfactory term, and we are wondering just what the basal pathological conditions were which led to the breakdown. It would be an excellent idea to have the blood examined, and the urine should be analyzed at frequent intervals.

Queries

QUERY 6404.—"Asthenia." B. G. S., Wisconsin, has in his care a farmer, aged 53, who had had pneumonia and pleurisy November of last year, being attended by a neighboring physician. He was left very weak and with a bad cough. "I saw him first in March. He now complains of loss of appetite, being very nervous and cold, and sweaty. His temperature runs between $1\frac{1}{2}$ and $2\frac{1}{2}$ degrees below normal at all times. He is always sweating, having his underwear changed two or three times a day. On going out doors on a hot day, his clothes soon are damp and he gets so cold that he must come indoors. The kidneys are normal, the bowels respond to any common laxative. Digestion is good. He uses dental plates, all teeth being removed. I have been giving nux vomica (or strychnine), digitalin, tonics, salt rubs, cool baths, atropine, et cetera. I have concluded that something has happened to his "heat-center."

We regret to state that, without a much clearer idea of underlying conditions, it is impossible to account definitely for your patient's condition. The symptoms you briefly describe show a marked vasomotor disturbance and are those presented in

asthenia. We should strongly advise that the blood and urine be examined and suggest that you forward a 4-ounce specimen of urine (taken from the mixed 24-hour output, stating total quantity voided) and a sample of blood to a competent pathologist, for examination.

Just what conditions are revealed by thoracic auscultation and percussion? Any marked loss in weight? What is the blood pressure? Pulse rate? Any arteriosclerosis?

It strikes us very forcibly that it would be advisable to keep this man in bed or at least in his room until the hyperidrosis is controlled. On general principles, we should advise the administration of nux or strychnine, with capsicum, every three hours. We also should give some such simple bitter tonic as quassin or gentian, a dose fifteen or twenty minutes before meals; likewise, minute doses of atropine valerate, continuing until slight flushing of the skin is observed. Some benefit will be produced by epsom-salt sponge-baths, followed by brisk friction with a rough towel; or else give the "salt-glow." Instruct your patient in deep breathing. Be very careful to have his diet of a highly

nutritious and easily assimilated character.

We do not believe we should use digitalin, but, you might, with advantage, give cactin with the nux and capsicum.

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 QUERY 6405.—“Hysterical Narcolepsy”? J. K. K., Iowa, has under care a girl, 12 years of age, who had the measles some three months ago and who since recovering has not been right. Her temperature has been slightly above normal each time it was taken. “She gets up in the mornings feeling fairly good, works around till about noon, then begins to feel tired and languid, and at about 2 o'clock each day she goes to sleep and sleeps till about 5 p. m., then wakes up crying. First it was a quiet cry, now it is loud and boisterous. She keeps up the crying till 9 or 10 at night continuously. When her sleepy spells come on, nothing they try to do short of roughness, it seems, will keep her awake. This is as regular as clockwork each day for now a month or more. Her mother is what I call hysterically insane at times, and is a nervous or what we used to call a neurasthenic patient. I have put her on belladonna, pulsatilla, and aconite, the latter in 1/3-drop doses, as the pulse is about 115 per minute and the temperature 99° to 100° F. I thought of giving bromide of ammonia in place of belladonna, but, there might be some meningitis lurking around. When asleep, her eyes are closed, but, the lids keep working or winking.

“The bowels are kept regular all the time. She eats a fairly good breakfast, then will eat no more, except a little dinner, till the next day. It seems nothing will divert her from her hysterical weeping. She seems to be perfectly rational when she wakes up in the morning and at any other time; only we can not talk her out of the weeping or keep her from falling asleep every afternoon. I shall appreciate help, through CLINICAL MEDICINE or by personal letter, from any of the medical fraternity. I suggested much outdoor light work or pleasure by the lakes, travel, et cetera.”

As you can readily understand, it is extremely difficult, indeed, impossible, to venture a diagnosis, but, considering the history, unquestionably you have to deal with a neurosis, most likely of toxic origin. Of course, the fact that the patient had

measles three months ago and the temperature is slightly above normal would lead us to suspect some septic focus. The tonsils and nasal passages should be examined thoroughly. We certainly should submit specimens of urine and blood, for examination, to a reliable pathologist. Do not forget, however, that you are dealing with a 12-year-old girl with an unsatisfactory family history. At this period of life, inherited nerve-instability is likely to manifest itself on very slight provocation.

Circumcision and dilatation of the anal sphincters might work wonders in this case. Of course, it is absolutely essential to exclude the existence of an imperforate hymen and retained menstrual discharge. In a well-developed, 12-year-old girl, menstruating may easily have commenced. We believe you may exclude any meningeal involvement, the periodicity of the attacks arguing strongly against the existence of such condition.

We should be inclined to attempt to break the regularity of the attacks by administering a hypnotic and keeping her asleep until about the period in which her usual sleepy spell comes on. She should then be aroused and the usual morning procedures gone on with. It would be interesting to observe if she then has several hours of wellbeing and begins to become somnolent toward evening, or, after the period at which she usually awakes up and begins the hysterical crying.

A possible disorder of the internal secretions should not be overlooked. It would be well, we think, to pay some attention to the thyroid gland. Note also the blood pressure. Test the reflexes. Be very positive in your suggestions and, by all means, have the girl in the open air as much as possible. It might be an excellent plan to remove her from home surroundings and influences for some time.

Upon receipt of further clinical data and laboratory report on specimens of blood and urine (4 ounces taken from the mixed 24-hour output, stating total quantity voided), we believe we shall be in a position to discuss the case more intelligently.

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 QUERY: 6406.—“Autointoxication.” M. L. C., Massachusetts, requests our opinion of this case: “Patient, a literary woman, now fifty-five. Twenty years ago, her

eyes gave out for close work. All regulation things were done for the eyes by competent oculists; however, nothing enabled the patient to return, with any comfort, to her chosen work. Later, she had to wear colored glasses. While she has always been constipated, she gave no thought to that, nor did any physician.

"First relief came from having abraded rectal and sigmoidal surfaces (so the New York physician said) touched with 2-percent nitrate of silver solution. Marked results followed this treatment; the patient was able the next day to discard her colored glasses, and her eyes improved steadily for a few treatments. No further improvement took place after five or six treatments, however, the eyes never returned to their former bad condition, she never since having worn colored glasses. Later, marked improvement resulted from having her coccyx removed. This lasted for some time. While gradually returning, the trouble never again became as bad as before.

"Six years ago, she was taken with salivation after using her eyes; severe palpitation also set in. For weeks preceding this, she had felt a 'pulling' in the throat after using eyes; also her voice became husky when using her eyes. This last symptom still remains. Two years ago, the patient became very edemic; she was short of breath; lips became blue on exertion; she complained most of discomfort at or around the pit of the stomach—could not describe it—a kind of pressure, worse on walking. This symptom was marked and persistent. The patient was supposed to be near her end, because of her heart, which is hypertrophied and has been so almost from childhood, following rheumatic fever.

"At this time, she went to a Battle Creek branch, where she was given a test breakfast, which revealed a great lack of hydrochloric acid, and she was put upon this acid with the meals. In a week, all edema had gone, she was up and around and more comfortable by far than for months. Also, she could use her eyes as never before for a long time. (No heart tonic was used at this time.) At another time, when her eyes were bad again, she was given an intravenous preparation of creosote, calcium, and iron (a preparation used by a physician here for colds and

especially for pneumonia), and with marked good results on the eyes. The eyes were fine for three or four days after this. At another time, the eyes came up under trimethyl tablets. At another time, they came up under galactenzyme. (These occasions I should have placed before the hydrochloric-acid record.) In the last year, she has had marked improvement from "bacids"—prepared by Palisade Pharmacy Company, New York. Twice, when it seemed that glasses must need changing, the eyes came up under the use of these bacids. Recently, chancing to take bismuth for an attack of diarrhea, the patient found eyes improved, greatly, wonderfully, and the sinking at the pit of the stomach, which she has had for months, wholly gone. Has not felt so well—so steady and firm, to use her own expression—as after taking these bismuth tablets.

"She uses high enemias frequently; for, as I should have said, the heart symptoms disappeared marvelously the first that she took one a year or so ago. These heart symptoms, by the way, have disappeared like magic under the bismuth. The patient says she can't remember when her heart has been so quiet, so free from fluttering, so quiet on turning in bed. She forgets that she has a heart since taking the bismuth. In walking, she finds herself off with feeling of strength; although, of course, her strength is very limited. Although far from a well woman, she is a resurrection, as it were, in comparison with the time when she was edemic, breathless, and with the pressure or compression at the pit of the stomach.

"Eyes, eyes, always eyes, are the patient's plea, and everything reports in them for better or for worse. Always they have responded to intestinal treatment, and to nothing else—that is to say, intestinal antiseptic treatment. Have you any such records? Are eyes so affected by autointoxication as this case seems to indicate? What should one expect to find in that colon or sigmoid or rectum? This case has led me to think of autointoxication in several other eye-cases, and each has responded to intestinal treatment.

"I am beginning to think that 'neurasthenic eyes' are due to autointoxication! Have you any suggestions?"

We have read with care your very interesting communication and are inclined

to believe with you that most of the symptoms presented by your patient have been and still are the result of some disorder of the alimentary tract, complicated, doubtless, by a derangement of the internal secretions. A study of the sympathetic nervous system will enable you, we are sure, to understand how easily a pathological condition of the intestine may affect the eye. In this connection, let us suggest that you spend a few hours reading Robinson's "The Abdominal Brain" and also Abrams' "The Blues."

The mere fact that from the first little or no improvement in the patient's condition followed the fitting of appropriate glasses should have led to a more thorough investigation of the individual and her secretions. The New York physician who discovered a congested, possibly ulcerated area about the sigmoid was, unquestionably, on the right track, and we are not surprised to learn that after a few applications of silver nitrate, the ocular conditions materially improved. That there were other foci of irritation is evidenced by the fact that further improvement followed the removal of the coccyx. However, it is barely possible that the preliminary elimination and rest consequent upon the operation had a beneficial effect.

The conditions which were present in this woman twenty years ago, however, must have been entirely different from those that have obtained for the past five years. It is reasonable to assume that she has passed or is now passing through the climacteric, and it is at this stage of life that derangement of the internal secretions (gonads, thyroid, pituitary, etc.,) may produce just such symptoms as she has complained of.

Naturally, also, at such time, the eyes suffer more or less and any eyestrain will aggravate reflexly the other condition. Hence, a vicious circle will be set up and all sorts of troubles arise. Relaxation of the splanchnics and gastric atony were revealed by the lack of hydrochloric acid, and, as soon as this was supplied, one of

the most-marked symptoms disappeared. Later on, the administration of other remedial agents evidently controlled the auto-toxemia to a certain extent or changed endocrine conditions, and again the patient improved.

Still, we come back to the fact that in this particular instance the alimentary tract throughout must be regarded as the *fons et origo mali*; for, we know that even recently the patient had a diarrhea, to relieve which, she took bismuth and thereupon experienced pronounced, permanent relief from other symptoms.

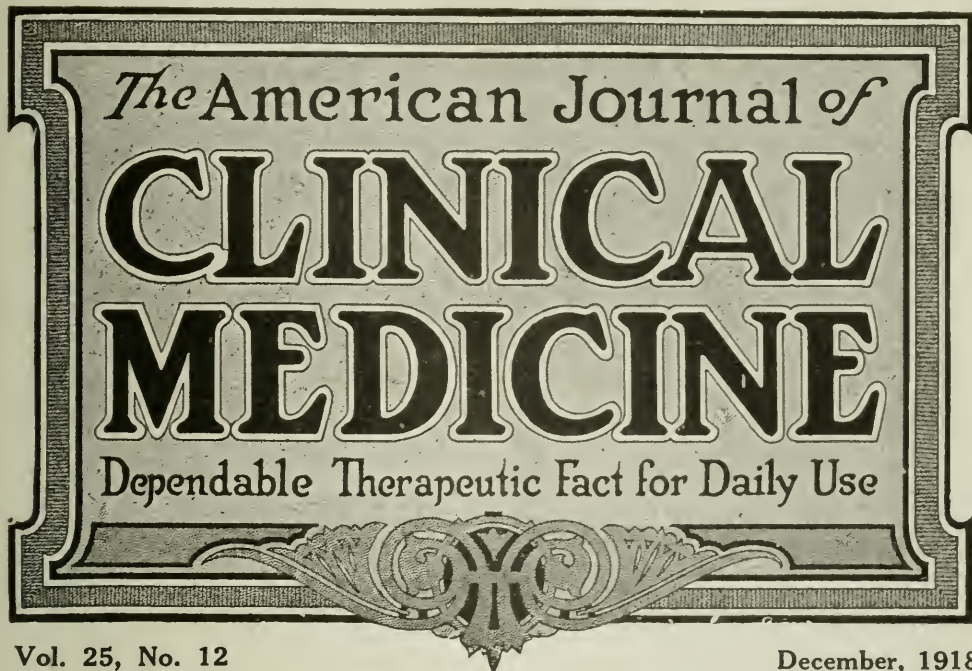
From this, we may argue that there still exists a congested, catarrhal or even ulcerated region in some portion of the intestinal tract, and it has been the writer's experience that such areas mostly are found about the sigmoid or in the region of the splenic flexure. It is an opprobrium to the profession that such conditions, when presenting themselves in an intelligent patient of this type, so often are dismissed with the brief diagnosis of "neurasthenia"—a term which, in this writer's opinion, is synonymous with "something wrong with the underlying vital force of the individual, but, of the nature of which we are entirely ignorant."

Some very wise specialists speak of such an individual as suffering from a psychomotor or a trophoneurosis—a designation slightly more intelligible—but, they fail to realize that there is a cause for all such departures from the normal, and nine times out of ten the condition will be found to arise in the intestine or the genitourinary tract.

Without going further into the subject, upon which volumes have already been written, we would congratulate you upon the correctness of the conclusion you have already arrived at, namely, that, in treating so-called "neurasthenic eyes" or, for that matter, any so-called neurasthenic, think of the possibility, indeed, of the extreme probability of a causative auto-toxemia, probably of intestinal origin.

We shall be pleased to hear further from you as to the progress of this patient.





The End—and a Beginning

EARLY in the month of November, the repeated and urgent demands on the part of the central European powers, to bring about a cessation of hostilities before their own countries were invaded by the Allied and American armies, were successful in so far as they secured the signing of the armistice. The two days of delirious joy and celebration that were occasioned by the premature announcement of the armistice having been signed and, then, by the actual news of the accomplished fact will remain imprinted in the memories of those observing and participating in the world's carnival for the rest of their lives. Literally, the world went mad, joy-mad. It committed all sorts of follies and gloried in its folly. We ourselves confess to having accepted the frequent liberties taken by the celebrating crowd with our hats, with our bald pates, and our persons in general, rather good naturedly and in a spirit of joining the Romans in their Roman doings.

It was quite natural after all that, after the terrific strain of the last four and one-half years, the rather sudden and definite

approach of peace should have upset the mental poise and equilibrium of the populace. Fortunately, the celebrating was entirely good natured and very few excesses were recorded. Sudden relief of the tension produced a turmoil reaction, but, very soon, the world that for one day was crazy and happy returned to its sober and earnest duties, resolving to attack its serious problems promptly and with a view to securing the best possible results.

And the problems that are now before us for the reconstruction of normal conditions are great as well as numerous. The terms of the armistice fortunately have made it impossible for the central powers to reopen hostilities and to work any material injury in their ultimate retreat from occupied territory. The central powers themselves have difficult problems of their own to solve as they are facing internal revolution which already has resulted in the removal of most crowned heads from power and the establishment of a number of independent republics. Under existing circumstances, it will be the duty of the

Allied and the United States governments to watch political events in central Europe and to prevent as much as possible revolution, bolshevism and anarchy. All governments having armies in the field have the task of managing the return of their soldiers to their homes and to peaceful industrial pursuits, as much as possible without disturbing seriously and injuriously industrial conditions in the home countries. Naturally, during war, conditions of industries had to continue their activities at home and, the young men being eliminated from participation in industrial pursuits, their places were taken by others. The return of the young men will create problems that must be solved peacefully and without injury to all those concerned. >

Then, there is the return of large industrial organizations from war conditions to those of peace. Already, the government has canceled many orders that had been contracted for when it seemed that the war might continue into the next year and longer. While the manufacture of war ammunition and other war machinery no longer is required, the industries that were concerned in it will have to resume their former occupations and production with as little friction as may be, keeping in mind the fact that several million young men will return sooner or later to take up their duties and again become active members in their respective communities.

Further, there is the problem of feeding not only our country but our army in Europe and, moreover, the task of aiding in the feeding of those peoples dependent upon our cooperation and looking to us for food. We have already succeeded during the past years in protecting Belgium from utter annihilation through starvation by supplying food for the hungry populace. We have contributed foodstuffs to the needs of the Allied nations and also those of Servia. Our resources will be drawn upon even more during the next year in order to enable the European peoples to tide over the time intervening until a new harvest can be brought in. The want of food, it has been pointed out frequently and truly, is one of the most prolific causes of revolutions and we are confronted with the necessity of supplying food not only to our own people and our soldiers, not only to our friends of England, France and Bel-

gium but also to our late enemies the German people, and, in short, probably to all European nations. While we can in a measure depend upon the cooperation of Argentine and Australia, the actual management of provisioning Europe probably will fall upon us and here indubitably there is the most difficult task set of any connected with the war.

Thus, there are many difficulties, many important tasks and problems confronting us that call for solution immediately in the next few months until "the boys come home." While they have given their young manhood, their strength, their enthusiasm and, often, their lives, to secure the aims for which we and our Allies were striving, it remains for us to reorganize the world and to provide means for the homecoming soldiers so that they may reenter civil life not only with the consciousness of having done their duty well and nobly but also feeling that we at home have done our part in the greatest struggle that the world ever has passed through.

A man's methods may be studied, his resources considered, and his efforts admired, but, the final verdict of posterity is based only on the results he accomplished.

FIGHTING INFLUENZA

"We learn from the newspapers," as Mr. Dooley says, that another wave of influenza is now on its way. It is sweeping over Europe for the second or third time, and, it is anticipated that, with the return of troops, the disease will again take on new virulence. Moreover, there are signs that with the coming of cold weather more cases of the disease are already beginning to occur. The wise doctor will take stock of his previous experience and employ the breathing spell to familiarize himself with the methods that gave other physicians best results.

We are printing in this number of CLINICAL MEDICINE several articles on the treatment of influenza, all of which deserve very careful consideration. The various theories regarding etiology are interesting, and so far as they bear upon the therapy, they should be considered with care, but, in the last analysis, the physician should endeavor to base his methods of treatment upon simple, common-sense principles. If he tries to do too much and to adapt his methods to every theory, he is likely to fail

where otherwise he might succeed. For instance, Doctor Croft's theory of the etiology is interesting, but, the present writer does not feel that it is wise to reject bacterin therapy because it does not fit in with Doctor Croft's hypothesis. The results quoted in his paper are altogether too startling to justify its rejection. On the other hand, Doctor Croft's method of treatment is one of the best we have ever seen. It meets the indications and is justified by the results.

If we were called upon to outline a method of treatment—one that is based on the one hand upon the recognition of the infectious character of the disease and on the other on a full recognition of the importance of the epidemic factor—it would be somewhat as follows:

Prophylaxis.—We would insist upon the following things:

1. Segregation.
2. Disinfection of the nasal passages and throat with some effective germicidal agent, our choice being for chlorazene and dichloramine-T, or the combined use of the two.
3. Vaccination with Rosenow's influenza-pneumococcus-streptococcus vaccine, or one very similar to it.

Treatment of the Disease.—We would follow closely Doctor Croft's outline:

1. Put every patient to bed, even when slightly ill.
2. Complete abstention from food for at least 48 hours—longer if the disease is severe. An abundance of hot drinks for diuretic and diaphoretic effect.
3. A daily cathartic, supplemented if necessary by enemas. To this, we would add the routine use of an intestinal antiseptic.
4. Avoidance of all depressing and secretion-checking drugs. Opium in all forms is contraindicated. Sparing use of salicylates. No coal-tar antipyretic.
5. Careful stimulation to meet emergencies. Digitalis, strychnine and camphor probably are the most useful drugs for this purpose.
6. Respiratory antiseptics with iodized calcium, which also loosens secretions.
7. Finally, the judicious use of influenza-, pneumonia-, and allied bacterins (being careful not to use over-dosage) supplemented by nuclein, to stimulate leukocyte production and overcome the leukopenia

characteristic of the disease; also, type-I-pneumococcus serum when indicated.

This outline of treatment is submitted for consideration and criticism. Out of the richness of your experience, we ask you, Doctor, to consider it after a study of all the articles on influenza published in this issue, and to give us a letter of suggestion, admonition or advice, for publication in our January number.

When you buy War Savings Stamps you do not give—you receive.

IS "FLU" INFLUENZA?

In a communication appearing among the leading articles of this number, Dr. Albert J. Croft, of Chicago, voices dissent from the prevailing idea that the influenza pandemic, designated as "Spanish Influenza," is really influenza, or, indeed, an infectious disease at all. His observations and cogitations have led him to the conclusion that, if our scientists were to make a careful chemical, biological and meteorological survey of the countries now affected by the so-called influenza, some irritated conditions of the atmosphere would be found that would account for the cause and rapid expansion of this ailment.

Doctor Croft believes that atmospheric and meteorological disturbances were created by the poisonous gases used on the battle fields, by the liberation of ground-air high in carbon-dioxide content through the digging of trenches, by the gases from decomposing bodies of men and animals and those set free by the destruction of cities and ammunition dumps; that these may have combined a form of gaseous compound with highly toxic properties, probably due to the rearrangement of molecules by the tremendous concussion produced by high explosives. Consequently, Doctor Croft views the condition termed influenza as in reality a nonbacterial and noncontagious disease caused by the inhalation of small amounts of a depressing, highly irritating, high-density gas present in the atmosphere, especially at night and when the air is surcharged with moisture, more particularly near the surface of the earth.

At variance with Doctor Croft's ideas are most publications on the subject of the pandemic, as is evidenced for instance in the interesting study of the disease pre-

sented by Doctor Goldstein, also in this issue. Bacteriologists and laboratory workers undoubtedly have isolated a considerable variety of microorganisms from the secretions of patients ill with so-called influenza. While many failed to discover the Pfeiffer bacillus, it has been claimed that this is to be ascribed to faulty methods of cultivation since the influenza bacillus does not grow on the ordinary blood-agar medium but this requires partial hemolysis in order to present a suitable nutrient and pabulum for the influenza bacillus.

While, undoubtedly, Doctor Croft's "minority report" is interesting and even may possess a degree of verisimilitude, we are impressed with the fact that, as far as our personal experience goes, the cases of influenza studied all presented the characteristic signs of a bacterial infectious disease. There can hardly be a doubt as to its high communicability, while the succumbing or resistance to the disease in many instances seems to have been a matter of exposure or nonexposure. Already we have attempted to offer explanation of the fact that robust and vigorous young persons fell victim to the disease more readily than did feebler persons. That does not mean, however, that the latter did not become affected at all, indeed, the disease attacked indiscriminately. On the other hand, there is this marked and surprising point of difference from prior epidemic of influenza, that small children and older people seemed to be almost immune, the patients ranging in age mostly from later childhood to vigorous manhood and womanhood up to 40 years of age. The youngest patients of whom we have personal knowledge were children five years old. Among our elderly patients, none acquired influenza.

While, therefore, there are several points that are strange and unexplained in the epidemiology of this Spanish influenza, we are inclined, personally, to view it as an infectious malady and we are confirmed in this opinion by the prompt and effective results of biological methods of treatment. We are of the opinion that this view of the problem is safest provided that it is followed to its logical consequences. Certainly, we are impressed with the fact that, of those well people who were immunized fully with a suitable vaccine, only an exceedingly small number became ill with

influenza and then only in a slight degree, recovery being prompt and uneventful.

In view of the fact that a second epidemic or a recurrence of the same epidemic is announced in Europe and probably will reach the United States in a few weeks' time, we believe that the safest advice is, to urge physicians to immunize their clients and friends as thoroughly as possible, while not neglecting the precautions of antiseptic nasal douches and gargles, and in this manner to protect as many persons as possible against the disease.

I have always thought of Christmas time, when it has come round, apart from the veneration due to its sacred name and origin, if anything belonging to it can be apart from that—as a good time; a kind, forgiving, charitable, pleasant time.

—Charles Dickens.

INFLUENZA'S TOLL OF DEATH

The Bureau of the Census in Washington is publishing from week to week the mortality reports from the larger cities in the United States. It has now summarized the mortality from influenza and pneumonia in the nine weeks from September 14 to November 9 inclusive. This, of course, does not include all of the deaths from influenza and its complications, because the epidemic still is virulent in many parts of the country; also, because reports are given only of the forty-six largest cities, including probably from 35 to 40 percent of the total population of the United States.

We learn, however, that, during this period and in these cities, there were 82,306 deaths from influenza and pneumonia. The highest number of deaths in any city was that in New York where 19,357 people succumbed. Next on the list was Philadelphia, with 12,665 deaths. Then came Chicago, with 8,275; Boston, with 4,355; Baltimore, with 3,685; Buffalo, 2,105; New Orleans, 1,978; Washington, D. C., 1,961; San Francisco, 1,903; Cleveland, 1,898; Newark, 1,636; Los Angeles, 1,214; and St. Louis, with 1,061 deaths.

The city having the highest rate of mortality was Philadelphia, with 7.4 deaths per 1000 population. Next was Baltimore, with 6.7; Fall River, 5.9; Nashville, 5.7; Boston, 5.4; New Orleans, Pittsburgh, and Washington, 5.1; Buffalo, 5.0; Lowell, Mass., and New Haven, Conn., 4.9; Cambridge, 4.8; Albany, 4.6; Providence, 4.4; Dayton, New York and Richmond, 3.9;

San Francisco, 3.8; Newark, 3.7; and Chicago, 3.2 per 1000 inhabitants.

On November 9, the last date given, the number of deaths from influenza and its complications was rapidly subsiding in most parts of the country, although it was still large in many important cities. In a few western and southwestern cities, it was increasing, and unofficial reports state that it is still spreading in many country localities. In a few cities, there was a subsidence of the disease, then a reappearance with increased mortality.

It is as yet impossible to say how many deaths from pneumonia have occurred in our military and naval camps, but, we do know that, thus far, the mortality has been far in excess of the deaths from wounds on the battlefields of Europe. At Camp Devens in Massachusetts, Camp Grant in Illinois, Camp Custer in Michigan, and Great Lakes Naval Training Station near Chicago, the Great Reaper has claimed his thousands. If we add to the number of deaths in the army and navy the additional and thus far unrecorded deaths in the civil population, it is safe to say that influenza has claimed thus far between 200,000 and 250,000 victims in the United States.

And the end is not yet. While the first virulence of the disease has passed, there still occur many thousands of sporadic cases in all parts of the country, and there are indications that soon another wave of the epidemic will sweep over the country. While we do not believe that it will be as serious in its results as the first wave, mainly because we now understand the disease better and know better how to deal with it, we do feel that it is likely to be a serious menace to the health of the nation during the coming winter, and that every physician should be fully prepared to cope with it.

Peace is the happy, natural state of man; war his corruption, his disgrace. —Thomson.

VACCINATION AGAINST INFLUENZA

In certain quarters in this country, there has been a disposition to throw serious doubt upon the value of bacterial vaccination either for the prophylaxis or treatment of Spanish influenza. This writer believes that this holding back for definite "proof" is unwise and harmful. There is already evidence enough that bacterial vaccines are

of exceeding value, particularly as prophylactic agents.

While some of our "authorities" in the United States are discussing this problem, over in England there has been official endorsement and adoption of the vaccine treatment. Thus, in *The British Medical Journal* for October 26, we find a report of an important meeting held in the British War Office on October 14, 1918, at which it was decided to adopt and utilize the bacterin treatment, both for prophylaxis and curative treatment. This meeting was presided over by Col. Sir William Leishman. The Director-General of the British Army Medical Service was present, and in his address to those in attendance spoke of the "great and urgent importance of their endeavoring to formulate a definite recommendation as to the employment of vaccines in view of the probability of an extension of the epidemic of influenza."

Among the things agreed upon at this meeting were the following:

The majority agreed that the bacillus influenzae was usually present, but, there was some doubt as to its primary etiologic significance; and the incidence of some yet undiscovered virus was regarded as possible.

It was agreed that the other organisms usually found and chiefly responsible for the pulmonary complications are pneumococci and streptococci.

It was unanimously agreed that inoculation with a suitable vaccine might be expected to be of value both in the prophylaxis and in the treatment of the disease.

It was agreed that the three following organisms should be employed in this vaccine: The bacillus influenzae, the pneumococcus and the streptococcus; also that a number of different strains and types of each organism should be utilized in the preparation of the vaccine, these organisms to be taken from cases occurring during the present epidemic.

For prophylaxis, it was agreed to use a combination of these organisms in the following dosage: First dose,

Bacillus influenzae.....	30 million
Pneumococcus	100 million
Streptococcus	40 million

the second dose to be double that of the first dose. This vaccine was to be sterilized at a temperature of 55° C. maintained for

half an hour; 0.5 percent carbolic acid to be subsequently added as an antiseptic.

Wherever possible, both doses of this vaccine should be employed, and at 10-day intervals.

It was thought that the reaction to be expected from this vaccine would, in the majority of cases, be either trivial or absent altogether.

It was also agreed that, where possible, the individual should be vaccinated prior to exposure to infection, but, that there was no objection to its employment after exposure, although considerable care should be employed if the dose is to be given to a person apparently coming down with the disease, in which event a smaller dose was recommended.

Children under three were not to be inoculated. For older children the following proportionate dosage was suggested: From 3 to 7 years, one-fourth of the full dose; 7 to 16 years, one-half of the full dose; above 16 years, the full dose. For colonial troops the dosage was also reduced somewhat.

In the treatment of the actual disease, the opinion was expressed that the vaccine is most likely to be of service in the treatment of subacute and chronic cases. In these cases, the initial dose recommended was one-fifth of the full dose already described.

In severe cases of secondary bronchopneumonia, the vaccine was not recommended, but, if it is desired to try it, it was advised that the initial dose should not exceed one-twentieth of the first dose recommended above.

In the United States, it has become the practice to give much larger doses than those recommended by our British colleagues; for instance, Rosenow, of the Mayo Foundation, recommends an initial dose of about 2 billion organisms, his formula including also the staphylococcus in addition to those recommended in England. The second dose, given after an interval of a week, is double the first dose, and the third dose is still larger. Despite the large dosage recommended by Rosenow, the reaction as a rule has been very slight, and in many cases altogether absent.

Rosenow has found that, even when the bacterin is given to persons coming down with the disease, no serious harm has resulted. The reaction, however, is prone

to be severe and followed in the majority of instances by rapid subsidence of the acute symptoms of the disease.

The results obtained by Rosenow and others with the prophylactic vaccination certainly have been startlingly good. We refer our readers to the paper by Doctor Alder published on another page of this issue. We also request those who have had extensive experience with the vaccine treatment to report results.

Never deny the babies their Christmas! It is the shining seal set upon a year of happiness. Let them believe in Santa Claus, or St. Nicholas, or Kriss Kringle or whatever name the jolly Dutch saint bears in your religion. —Marion Harland.

KEEP YOUR LIBERTY BONDS

The Fourth Liberty Loan Drive has barely been concluded, and most of us have engaged our resources for several weeks to come in order to liquidate the obligations that we assumed and to provide sufficient funds for the government to meet the expenses incidental to our participation in the war. The manner in which the government has raised the needful sums constitutes an investment for the people that, while producing only a small return in interest, has the great advantage of being absolutely sound and proof against all vicissitudes of fortune. The holders of Liberty bonds, no matter of what series, have in their possession an unfailing source of income and one that can be counted upon without fear of disappointment. Whether the individual may possess only one bond or many, the investment is perfectly safe and in all probability will increase in value in time.

Frequent warnings have been voiced recently against disposing of Liberty bonds and advising their holders to preserve these bonds carefully until their full maturity. On the other hand, speculators frequently offer to take Liberty bonds in payment for other obligations and they even encourage the exchange of Liberty bonds for participation in speculations and investments that, while promising larger returns, are not nearly as secure as are these "promissory notes" of Uncle Sam.

We wish to insist strongly that, whoever is the fortunate possessor of Liberty bonds, should keep them in his possession at all cost and should meet the payments promptly and not sell them under any circum-

stances. We realize that contingencies may occur when ready money is urgently needed. The sale of Liberty bonds under those circumstances would not only be foolish and wrong, because it tends to depreciate their market value, but it would be entirely unnecessary for the reason that Liberty bonds constitute an excellent collateral upon which any bank will be ready and willing to advance money by way of loan. We have said that the market value of Liberty bonds may be depreciated if many of them are thrown on the market. That, of course, can be true only for a time and never will interfere definitely with their ultimate value since the United States Government eventually will recall all bonds at their face value and always will meet the interest payment promptly.

We look forward to the Fifth Liberty Bond issue which will be necessary in order to enable the government to meet the obligations of demobilization and other expenses connected with the winding up of the war business. Whatever we have said regarding the prior Liberty bond issues will apply with equal force to the next. We should hold ourselves in readiness to subscribe liberally and largely to any funds that the government calls for, for carrying out its obligations incurred through the war. We should support the government whole-heartedly and enthusiastically and even now prepare to participate in any loan—whether it be raised under the old name or as "Victory loan"—that may be called for.

The man who loves home best, and loves it most
unselfishly loves his country best.

—J. G. Holland.

PLURIGLANDULAR THERAPY

Recently, we received from Dr. Henry R. Harrower, of Glendale, California—well known to many of the readers of *CLINICAL MEDICINE*—a copy of his booklet titled "Pluriglandular Therapy." From a hasty reading of its contents, we gather that by this term is meant the bringing to the foreground of the close interrelation subsisting between all the various secretions of the endocrine glands. From a therapeutic standpoint, this means, the use of combinations of various gland extracts, or, as Harrower calls it, "synergistic organotherapy."

Thus, for instance, the same patient who requires thyroid extract may and probably

(if a woman) does, need stimulation of the ovarian function. Just as combinations of iron, quinine, and strychnine are better (perhaps) than the various constituents used separately, these combinations of these gland substances serve better than the separate substances.

Working upon this theory, Doctor Harrower has devised a considerable variety of gland combinations, which are being put on the market in standard combinations, combinations designed to meet a great variety of conditions. If you are interested in this subject and wish to delve more deeply into it, we advise you to write to Doctor Harrower. And, by the way, the Doctor is publishing a very interesting little magazine, which he calls *The Organotherapeutic Review*. You should request a sample copy.

ARE LABORATORY OBSERVATIONS INFALLIBLE?

We have repeatedly, in these columns, warned against the unreserved acceptance of the results of laboratory-observations for conditions confronting the clinicians at the bedside, and only recently have pointed out (October issue, p. 809) that any observation made in the laboratory always requires confirmation by the clinician, if it is to be of actual value. In this, we are supported by opinions voiced by many clinicians, and even by some laboratory research-workers; and it has come to be recognized almost generally that laboratory-research must be controlled and guided by the clinician, in order to be acceptable.

It is, therefore, somewhat startling to read in an article recently published by a noted New York clinician, the following opinion expressed:

"A discovery that is founded upon laboratory-observation can be immediately accepted by the medical profession and applied without any discussion or debate. A discovery founded upon clinical inference must always be a matter for speculation and question by many observers, and holds its place only by very insecure tenure. Later on, the laboratory may discover a basis for the remedy, and then it takes its place in established practice."

The author of the article from which the foregoing paragraph is taken, continues by declaring that in this way ipecac has been

employed for many years in the treatment of dysentery, while only of late has the discovery of the ameba put this practice upon a definite basis.

This point of view is as astonishing as it is incorrect. One might conclude from it that laboratory-findings are infallible and can not be appealed from. And, yet, it happens time and time again that the pronunciamientos even of noted and leading investigators are disputed and, indeed, refuted by others, even though they may be founded upon careful and exact laboratory-investigation. We need only recall the animated discussion following upon the first publications by Sir Almroth Wright concerning the opsonins. Before that time, and afterward, the agglutinins, precipitins, and other immune-substances were considered by certain research-workers and clinicians as indicative of an existing immunity, while this was being strenuously denied by others. To be sure, in the last few years, the consensus has been that all immune-substances do indicate the existence of an immunity and that their discovery in a given serum must be explained in that sense.

If conclusions founded upon laboratory-observation never had to be revised or even retracted, it might be possible to accede to the dictum quoted in the foregoing. But, unfortunately, the conditions under which laboratory-observations are gained are only less subject to variations, only less guided by unknown factors than are those of clinical observers. Indeed, the greatest source of error in clinical observation, namely, the unknown factor resting in the individual peculiarities (both physical and psychical) of the patient, by no means is absent in the laboratory, since it has been found that even guinea-pigs of the same litter and of the same approximate weight respond differently to identical treatment. Moreover, in certain ways, the investigation regarding the action of drugs must, necessarily, be misleading to the clinician, if it is to be based upon laboratory-observation so as to be unconditionally acceptable. To cite only one instance, experiments have been published in which expectorant drugs failed to increase bronchial secretions in healthy dogs. Yet, we venture to say that there is no clinician that is willing to act upon this observation and to eliminate expectorants from his armamentarium when he desires

to increase the bronchial secretions in a given patient.

We had been under the impression that there no longer is any illusion concerning the entirely limited value of laboratory-observations, great though they admittedly are. It is unfortunate that time and again laboratory-research is placed upon a higher plane than is clinical observation, and it should never be forgotten that even the most exact laboratory-results can be of value only after they have been confirmed and substantiated by clinical observation.

I love my country's good, with a respect more tender, more holy and profound than my own life.
—Shakespeare.

THE VOLUNTEER MEDICAL SERVICE CORPS

The Council of National Defense authorizes publication of the following information:

Interest among the members of the medical profession as to how their services are to be utilized in the Volunteer Medical Service Corps, once they have been enrolled and have put on the badge that indicates their willingness to serve and readiness to respond to a request from the Surgeons-General of the Army, the Navy or the Public Health Service or from the Provost Marshal-General or from the General Medical Board of the Council of National Defense, has led to the announcement by the Central Governing Board of the basic system of classification for the organization. The lines on which the classification is made were determined by the Committee on Classification of the Central Governing Board, and whose report was adopted. This Classification Committee has on it representatives of the Army, Navy, Public Health Service, Council of National Defense, American Red Cross, Hospital, Colleges, Civilian Doctors, War Industries.

A summary of these classes follows:

Class I.—These will be the physicians first recommended by the Central Governing Board, to apply for commissions in the Medical Reserve Corps of the Army, Reserve Force of the Navy or for appointment in the Public Health Service. They include physicians under 55 years of age, who are without any obvious physical disability that is disqualifying and who have not more than one dependent, in addition

to supporting themselves; or who have an income or whose dependents have an income sufficient for the support of dependents, other than that derived from the practice of their profession.

Several exceptions are provided for with reference to evident essential needs. Whether a physician's services are essential to his community will be established by the Central Governing Board, or recommendation of representatives of the Board appointed by it to make a survey of local conditions. Whether a physician is essential to an institution with which he may be connected, will be established after conference between representatives of the Central Governing Board and representatives appointed by governing bodies of the institutions concerned. Similarly, the question of whether a doctor is essential to a health-department will be established by conference between the Central Governing Board and the head of that health-department. The question whether a teacher in a medical school is essential to that position will be established by the Central Governing Board and representatives of the institution. Conference between the Board and accredited representatives of industries concerned will determine whether doctors employed as industrial physicians are essential in those positions. A physician essential on his local or medical advisory board will not be disturbed.

Class II.—In this class will come physicians under 55 years of age and who are without any obvious physical disability that is disqualifying, and who have not more than three dependents in addition to having to support themselves. These will be recommended by the Central Governing Board, when the needs exists, to apply for commissions.

Exceptions in Class II are the same as in Class I.

Class III.—These embrace physicians under 55 years of age that are without any obvious physical disability that is disqualifying, but who have more than three dependents in addition to having to support themselves; and they are the physicians included among the exceptions from Classes I and II, namely, those essential to communities, institutions, health-departments, medical schools, and industries. They will be recommended by the Central Governing Board to apply for commissions when the

emergency is so great as to demand their services.

Class IV.—In Class IV will come those physicians who are ineligible for commissions in the Medical Reserve Corps of the Army or the Reserve Force of the Navy, but, who are available for all other services. The physicians in this class include those over 55, those having an obvious physical disability that is disqualifying, and those rejected for all government services because of physical disability.

Physicians not professionally eligible for the Medical Reserve Corps of the Army or for the Reserve Force of the Navy or for appointment in the Public Health Service will be recorded, but, not admitted to the Volunteer Medical Service Corps.

Applications for enrollment in the Volunteer Medical Service Corps continue to come in from physicians from all over the country and by every mail to the headquarters at the Council of National Defense Building. These are being classified as rapidly as possible. Representative physicians from various parts of the country are assisting in the work of classification.

State Executive Committees, enlarged to handle the work of the Volunteer Medical Service Corps, are perfecting the organizations in their states, and county representatives have been appointed in practically every county in the country. Group meetings are being held in many of the states, at which the State Executive Committees and county representatives are being addressed by members of the Central Governing Board of the Volunteer Medical Service Corps.

Peace won by compromise is usually a short-lived achievement.
—Winfield Scott.

THE AMERICAN RED CROSS

During the month of December, the Second Christmas Membership Campaign of the American Red Cross will be inaugurated with the avowed object of enrolling every man, woman and child residing in the United States in a universal membership. The present members will be invited to renew their active association with the Red Cross, and new members are to be enrolled wherever possible excepting among the men in military and naval service.

It would be supererogatory to recite over again, even in a fragmentary manner, the

wonderful work accomplished by the American Red Cross, not only in association with the Red Cross Societies of Europe and other countries (notably the Japanese Red Cross) but, also, in its individual unaided efforts to relieve suffering and want, more especially in Belgium and in Servia. Nor should we forget the readiness and promptness with which the Red Cross responded to the call for aid immediately after the Halifax disaster and, in short, the constant untiring readiness which this organization manifests wherever the energy and resources of communities or nations have met with adversities; wherever suffering is to be alleviated and want relieved.

It seems a matter of course that physicians should be closely associated with the Red Cross by virtue of their calling. Yet, it appears that there are many medical men so preoccupied with their immediate professional duties and interests as to defer cooperation with the Red Cross, possibly in a spirit of "letting George do it." We want to urge upon all readers of *CLINICAL MEDICINE*, not only the urgency of the existing problems confronting the Red Cross, but, also the fact that cooperation with this work is less a duty of physicians than, rather, a privilege to which they are entitled, being members of the healing profession. We want to see every physician, every physician's wife, and father, and mother, and brother, and sister, and son, and daughter, enrolled in the American Red Cross. The actual cost in money is slight. The potential good accomplished by such a universal membership is immense. Let us all join in.

Ah! when shall all men's good be each man's rule,
and universal peace lie like a shaft of light across
the land.

—Tennyson.

WAR SAVINGS STAMPS

As we are preparing this issue of *CLINICAL MEDICINE* for the press, we are reminded that, on Thanksgiving Day, a renewed campaign is to be inaugurated looking to the sale of large quantities of War Savings Stamps. Physicians do not need to be reminded that, with the signing of the armistice, and the cessation of hostilities, a few weeks ago, the country's expenses incidental to the war by no means

have been eliminated. Indeed, it is self-evident that, at the present time and in the immediate future, the Government stands in urgent need of enormous funds to carry on the work of demobilizing, of industrial and economic reconstruction, and so forth; and, also, to meet the obligations toward the European nations that our participation in the war has thrown upon us—and still more that have been incurred by us voluntarily by virtue of our readiness and willingness to aid and alleviate the suffering and want of nations wherever we might be of assistance.

While much of this work will be undertaken by the American Red Cross, there are great and onerous duties to be solved by the United States government and, for this, it stands in need of funds that should be provided spontaneously, willingly and cheerfully by the people, individually—not, by taxes.

There have been four issues of Liberty Bonds to which the nation has subscribed liberally. We are told that, soon, we shall be asked to subscribe for a fifth and, perhaps, a sixth issue. There is, however, another means of loaning money to the Government, in small sums, a method that is available to people who can not invest even \$50.00, but, who yet would be glad to contribute and give their mite toward the great humanitarian and needful work that our country is accomplishing. We refer, of course, to the War Savings Stamps.

The sale of War Savings Stamps should meet a ready response by high and low, rich and poor. It not only provides means that are immediately available for necessary expenses on the part of the Government, but, it is a method for the man and woman of slender income to put by a little money and exercise thrift in small things; at the same time it supplies a valuable lesson in habits of thrift, of economy and of saving. Investment in War Savings Stamps is sound and remunerative. The loan advanced in the purchase of these stamps will be repaid in the course of a few years with interest and, through this system of raising funds, the Government will have benefited the individual citizens of the country in many ways by inducing them to economize and to save.

Leading Articles

The So-called Influenza Epidemic*

A Plausible Theory as to the Etiologic Factor With a Presentation of the Therapeutic Measures Employed in the Successful Treatment of Over Five Hundred Cases Without Mortality

By ALBERT J. CROFT, M. D., Chicago, Illinois

IN the preparation of this paper, I have had but one thought in mind, namely, to present in plain terms my observations on the so-called influenza epidemic.

When everybody from a baby to an adult greets you with, "Doctor, I've got the flu," it is reasonable to assume that some widespread etiologic condition exists. The rapidity of extension of the pandemic throughout the world certainly has demanded of the practitioner quick thinking and decisive action, no matter whether the cause is psychic or material, in order to obtain satisfactory results. To assume a "watchful waiting" pose, pray the rain to lay the dust, try out a new vaccine, or wait for science to wrangle about the cause, is, to increase the mortality rate.

It has been proved that laying the dust does not reduce either morbidity or mortality, that vaccines have given little aid, and that science still is hopefully working in the laboratories.

When scientific abstractions have failed us at critical moments, we of necessity must come back to earth, shoulder the burden and in our own practical way treat each case as intelligently as we may, so far as possible giving immediate relief and comfort to our patients.

We are told that the present epidemic is influenza, a virulent type of the old fashioned grip, imported to our shores from the battlefields of Europe, the quiet cities of neutral countries and the agitated cen-

ters in Germany. Even if this theory is correct, still, I plead for decisive action in treatment of all cases in order to prevent the endemic and sporadic outbreaks which are sure to occur for several years to come.

Having impressed upon your minds the necessity for immediate, practical treatment of all cases as you understand them regardless of the scientific theories which are now in vogue, I wish to present to you my observations in over five hundred cases of the "flu" epidemic and also to submit to you a theory as to the cause of the disease.

Present Epidemic Not Influenza

I am convinced that the epidemic now visiting our country and other parts of the world is not true influenza. This may seem rather a bold assertion for a general practitioner since our scientific brethren already have christened it, but, where are the facts upon which they have based their conclusion that this is an influenza epidemic? Up to the present time, they have given us no tangible evidence. I will go still further in saying that this pandemic really never has been positively identified. In the absence of proofs, should we accept their dictum in regard to their biological treatment and discard the knowledge gained in therapy during a lifetime of practice?

The cause of the malady, whether biologic or chemic, originated in the camps and trenches of Europe. There, the convenient term of "influenza" was first adopted for reasons still obscure to us. As the disease spreads, we see creeping into the literature the terms "Spanish influenza"

*Paper read before the Douglas Branch of the Chicago Medical Society, November 13th, 1918. Discussion opened by G. Frank Lydston, M. D.

and "German influenza" because of its prevalence among Spaniards and Germans and not because of any type-differentiation, etiologic factor, specific symptomatology, or such. As it affected a few other nationalities, we have had, since then, the Portuguese influenza and the South African influenza and, mixed in here and there, a few cases of Irish influenza.

In its spread to the new world, we at first nursed the most original type, the "Spanish influenza"; but, being Americans, we had to drop the word "Spanish" and simply called it the "flu", and American influenza. Our Southern neighbors, the Brazilians, refused to accept it as an influenza epidemic; so different had the medical profession of that country considered the phenomena from the wellknown Leichtensternian types.

The Deplorable Fear of Influenza

It is regrettable that the notoriety given these phenomena under the guise of a serious influenza epidemic has caused a great deal of unwarranted fear in the minds of the people, which has materially weakened their already depressed war-time nerves to such an extent that they have become easy victims to pneumonia and other diseases. Indeed, when we are called to see a patient, we invariably find an excited household and the first important obstacle to overcome in the patient is, a general nervous breakdown from fear due the belief that he is an influenza victim and, therefore, a sure candidate for the graveyard.

Relieve and ease his mind of the influenza panic by diverting his thoughts into more pleasant channels and refusing to accept offhand the family diagnosis of "influenza", and you will have defeated the greatest menace of this malady.

As to the Bacterial Etiology

In regard to the etiologic factor, we are informed that some investigators hold a micrococcus responsible for the assault while others attach the guilt to members of the bacillus group. It is a proven fact that all previous epidemics of influenza vera were attributed to the very minute bacillus of Pfeiffer. This organism, however, so difficult to seed on the usual microbial foods, presented difficulty in isolation. Nevertheless, it was found to be constant in 20 to 50 percent of all cases according to Rosenow of the Mayo Founda-

tion. Have our scientists been able to isolate the Pfeiffer bacillus in the majority of cases of this epidemic? If they have failed to uniformly associate this organism with the condition, why call it influenza? So far as a specific bacterial theory is concerned in this epidemic, I have been unable, so far, to credit it. Is it not possible that the normal bacterial flora of the nose and throat has gained ascendance in this epidemic? It is natural to assume that the bacteria habitually present find good soil for growth and transformation into pathogenic types in a frightened, physically exhausted, nervous individual. I believe that they are very important as a secondary factor and that the increase in deaths from pneumonia may be attributed to this cause.

The Author's View as to Etiology

In the absence of positive proof of a specific bacterial cause and after due and careful consideration of the course and symptomatology, of the many cases under my observation, I have arrived at the conclusion that, if our scientists were to make a careful chemical, geological and meteorological survey of the countries now affected by the so-called influenza, some irritated condition of the atmosphere would be found that would account for the cause and rapid extension of this ailment.

The numerous gases used on the battle fields of Europe with their highly poisonous properties, the liberation of a large quantity of ground-air high in carbon dioxide content due to trench systems, the gases from decomposing bodies of men and lower animals, and those set free by the destruction of cities and ammunition dumps during the last few years, may have combined to form a gaseous compound with highly toxic properties probably due to the rearrangement of molecules by the tremendous concussion produced by high explosives. With this idea in mind, I am going to advance the theory that the condition termed influenza, is in reality a non-bacterial, non-contagious disease caused by the inhalation of small amounts of a depressing, highly irritating, high-density gas present in the atmosphere, especially at night, and when the air is surcharged with moisture, more particularly near the surface of the earth.

That vegetation has suffered likewise from this "gas poisoning" which has im-

pregnated the atmosphere of our cities, may be recognized by the significant statement of an old farmer, residing in Marinette County, Wisconsin, who, on noting last August the feeble and withered condition of his crops without any apparent cause, made the following unusual remark: "When vegetation perishes under favorable conditions for growth, it may be taken as a sign of trouble for the people." This farmer, accustomed to recognize the relation between nature and its creatures, saw in the withered vegetation occurring under favorable conditions a premonition of impending disaster. He felt that, if no usual causes could be found which would explain the perishing of his crops, there must be something lying low in the atmosphere which surrounded his plants and, therefore, encompassed all living things. The late Michigan peach crop this year has been a complete failure and there are reports of similar crop failures throughout the country during the so-called epidemic. I do not wish to be quoted as saying that I attribute these crop failures throughout the country to a gas poison of definite composition, I have simply asserted the possibility and I am going to leave the theory of a gas-poisoned atmosphere to those who are well versed in chemical detection of gases and in geological science, to prove or disclaim what seems to me a plausible theory.

Some Epidemiologic Facts

The disease which we are now combating has been characterized by very rapid dissemination. This rapidity, although beyond the limits of human conveyance, has been one of the dominant factors in terming it influenza. If, perchance, diarrhea had been a prominent symptom, the term "cholera" probably would have been substituted and, instead of an influenza epidemic, we would have scared the population into a cholera epidemic.

Sneezing, coughing and spitting are the principal means of dissemination, we are told, yet, large sections of Chicago and many suburban towns have escaped the epidemic. The distributing center of infection in a large city during an epidemic usually is the crowded downtown district where people from all parts congregate. Yet, it is significant, that, although all were equally exposed, the northern and southern portions of the city were the most seriously affected. This unusual distribution is not

characteristic of a bacterial epidemic nor of contact infection. If by sneezing and spitting the atmosphere had become laden with germs and if these organisms were really influenza germs, they, being the smallest recognizable bacilli, must be undoubtedly the lightest; hence it is natural to assume that they would have floated all over the city and a great diffusion of the disease should have occurred. On the other hand, a gas of great density with a clinging molecular composition would hang high during the day and low at night because of the slow nocturnal winds. Its clouds would not be so easily shifted, yet, their distribution would vary with the wind currents, hence, areas more circumscribed would be affected—as has been the case.

A Poison-Gas

The apparent immunity or susceptibility of people to the disease depends on whether or not they come in contact with the gas. The weakened and diseased individual, the healthy and robust individual, the male and the female of the species, the young and the old, all are possible candidates if caught in the path of the gas. The severity of action, however, should depend upon the amount of gas absorbed, the state of health at the time and, consequently, the power of the body to neutralize its effects, but, paradoxically, that "the weak die first" has not been the rule in this disease. Indeed, the greatest number of its victims have been big, apparently strong, well nourished persons.

Previous to the heavy rain fall, members of the fire department were ordered to sprinkle the streets at night in order to keep the dust down, it being the prevailing idea that settling the dust would prevent the further spread of the disease. One hundred and twenty members of this "dust squad" became victims of the disease during the three days that followed.

There are no predisposing factors as far as sanitary conditions are concerned, since the disease has caused considerable worry to our more fortunate wealthy brothers living under favorable sanitary conditions.

The mode of transmission is undoubtedly through the agency of the atmosphere, hence, I do not believe that personal contact is responsible for such a rapid, irregular spread, when countries having slight relations with infected countries have been visited with the epidemic. Of especial in-

terests are, the outbreaks occurring among the Eskimos of the far north and the natives of Patagonia in the far south.

Concerning the Symptoms

The pathologic phenomena involve not only the respiratory tract but also the alimentary, vascular and nervous systems. Involvement of these systems seems to occur during part or the entire course of the disease and with such constancy that it is impossible to recognize the three well known clinical types of influenza.

The irritating substance which gains entrance into the body, either through the nose or the mouth, produces in its wake a hyperemia the degree of which depends upon 1, the quantity of the irritant absorbed; 2, the condition of the system at the time of absorption.

If the irritant has been taken through the nose, the lining of that organ becomes hyperemic and a decided coryza may result. In the great majority of cases, however, the catarrhal condition is absent and replaced entirely by bleeding of the nose.

The upper portions of the tract including the buccal cavity, pharynx and soft palate are then affected and, as the cause spreads downward, hyperemia of the trachea and bronchi occurs although the smaller bronchioles and grosser structures of the lungs seem to escape during the course of an uncomplicated attack.

The severe tugging in the chest complained of by the majority of patients seems to be due to a greater degree of hyperemia at the bifurcation of the trachea and junction of the large bronchi, due to the mechanical resistance offered at that point.

The irritating substance seemingly affects the pneumogastric, causing nausea and vomiting especially as the esophagus seems to escape the hyperemia, there being no clinical evidence of such involvement.

I am of the opinion that a simple, chemical, non-bacterial hyperemia in different degrees of severity is the initial structural phenomenon to which many secondary changes owe their origin. This is the nucleus, the starting point for bacterial invasion; because of the action of the irritating substance upon the tissues, the hyperemic parts are damaged to a varying degree and suitable conditions for bacterial growth become established.

I repeat, that chemic hyperemia is the cardinal initial pathologic change. If this

is slight, no further changes may occur excepting those produced by the absorption of the gas. On the other hand, if considerable, edema of the larynx, trachea, bronchi and of the lungs develops, and death may ensue from exhaustion or edema of the lungs and not from an extensive bronchitis. The considerable engorgement of the vessels of the neck and the severe hemorrhages which occur in some cases are due to the mechanical exertion caused by the edematous condition of the lungs and not by any pneumonic inflammation.

In all cases, the poison and the secondary bacterial toxins seem to affect the nervous system giving rise to a general constitutional breakdown and a rapid lowering of the vitality. It is during this period, that inflammation of the bronchial tubes becomes dominant. The middle ear, the frontal and ethmoidal sinuses may become involved by extension. The sputum is mucopurulent and of grayish yellow color, and bacteriologic examinations in all cases proved to be negative for the Pfeiffer bacillus. Occasionally the sputum is tinged with bright red blood which is due to the congestive condition of the respiratory tract.

The Furred Tongue

The most pathognomic sign is a "furred tongue"; this you will find to be very constant and occurring not only in those who are already sick but in those who are likely to be attacked. It seems to appear one or two weeks before the onset. The furred condition is chiefly located in the posterior part but extends anteriorly. At first it is of a peculiar yellowish brown or white; later in the course of the disease the color becomes dark brown with a yellowish green tinge and will not respond to the usual treatment for gastric disturbances.

During the examination of conscripts, I have made a point to determine the condition of the tongue. In one group of twenty-five men examined, I was able to detect the "furred" tongue in eighteen; in thirty-four men examined, thirty-two showed "furred" tongues; in forty examined, twenty-eight showed "furred" tongues; the degree of coating varying with atmospheric conditions. Recently, I was able to record fifty-four "furred" tongues out of fifty-seven examined. On this day, the atmosphere conditions seemed to be very depress-

ing. The day was dark and gloomy and a heavy, cold mist hung over the city.

I shall refer here to other symptoms in a general way as time will not permit of extensive descriptions, but I wish to emphasize the fact that the furred tongue is the best indicator for the general practitioner and I believe that, if stress were laid on its significance and a general adoption of "have your tongue examined" were instituted among the populace with the object of warning the individual showing a positive picture, the prevalence of "flu" would be markedly reduced.

The Symptomatology

As a matter of convenience, the cases may be grouped under two heads, namely, 1, a non-febrile type, characterized by the absence of fever providing no complications develop, and 2, the febrile type, characterized by rapid rise in temperature which may be due to the absorpton of the gas, the changes being directly associated with the initial hyperemia or to ensuing complications.

The general symptomatology may be ascribed to the effects of direct absorption and to secondary changes. The greater number of my cases have been of the afebrile type. When fever is present, it usually is regular, rising to 100° to 102° F. in mild cases and 103° to 104° or 105° F. in severe cases. In the absence of complications, the fever should not be regarded as a death sign as it usually responds to active treatment and subsides within three days after such treatment has been instituted. In some cases, pain and soreness are general throughout the muscular system, especially in the joints and lumbar region. This generalized soreness is not encountered in all cases. A tugging, oppressing pain over the chest and a feeling of depression and pain over the stomach, often described as a "ton of lead" feeling, are constant and important features in the diagnosis of this condition. Headache, if present, is of the frontal type and very severe in some cases. Nose bleed was met with in some cases coming to my attention. In a great majority of cases, the onset is characterized by dizziness, nausea and vomiting, especially after a hearty meal; most of these patients are in robust health and show no apparent signs of disease.

Thus, if the disease we are now combating really is influenza, I must say that

the symptoms are atypic and the bacterial cause of the disease is obscure.

The dizziness, the frequent nausea and vomiting, the pain over the stomach, the hyperemic condition of the tubes, the absence of initial fever, the abruptness of the attack, the failure to find Pfeiffer's bacillus, the response to early treatment, are all in favor of a chemical toxemia and not a bacterial infection.

The Diagnosis and Prognosis

In regard to the prognosis, if the case is brought to your attention early there is no cause for worry providing you immediately relieve the mind of the patient of the dread of influenza and resort to immediate treatment of the symptoms in a plain, intelligent manner. I have had no loss from influenza or pneumonia as the records will show, but, I have insisted that my orders should be strictly followed.

Influenza at present is the fad, but, do not let the fad get you. No matter whether it is ingrown toenail, trench foot, delirium tremens, the mechanical sentence is passed: "You have got the flu." I recently saw a man who had been suffering for years from a kidney stone: on his arrival home, his family physician, who was summoned, on hearing of the aching pains in the back, pronounced it "influenza." The family was not satisfied because they were accustomed to the old chronic pain, so, another physician was called and a confirmation of the original diagnosis was made. After stopping his so-called influenza pain with hyoscine-morphine, I recorded him on my books for an early operation.

I could mention many more instances of snap-judgment influenza diagnosis, and I wish to state that this flu fad had lodged so deeply in my own mind that it was with difficulty I released myself from the prevailing obsession.

I believe in giving the devil his due, hence, permit me to say that the increase in the number of reported cases was due to this fad. We got into the habit of calling everything the "flu" and we failed to recognize anything else within the realms of medicine. The number of cases reported was exaggerated, and, therefore, the early statistical records of the "flu" epidemic are not to be relied upon.

The Treatment of the Disease

In regard to the treatment, if the tongue is characteristically furred, order the in-

dividual to bed, tell him to rest, take it easy, avoid mental and physical exertion and, above all, relax his mind. If he is to develop the disease, you have prepared his system for the attack. If he is not on the list for an attack, you still have accomplished something. The present conditions of business, the political issues at hand, and the anxiety which war and peace has caused, have increased the nerve tension and blood pressure of every thinking, active American, hence, he needs rest on general principles.

I have had very little experience with vaccines in prevention or cure. As a practitioner, I wish to say, quick results are what we are after. I caution against the use of vaccines without resorting to other forms of therapy, although I am not unmindful of the scientific efforts that are being put forth in this direction. To expect to obtain immediate results in the use of vaccines is folly, as the active immunity which they produce takes about ten days to become established. What is to become of our patient during these ten days? Immunity produced by a vaccine that is made up of so many kinds of germs is not acceptable to me. If a specific germ draws a specific antibody from the body cells, then ten different specific germs must in turn draw ten specific types of antibodies. Can you picture a body cell to which are attached ten different germs, each one asking for an antibody? "Some cell"—if it grants the request. The idea always has reminded me of the period when cruelty to human beings was indulged in for the sport of kings. Just think of a human being, tied to ten horses each pulling in a different direction and claiming a certain portion of the body.

The Author's Method of Treatment

Now, I will describe to you the method of procedure which I have adopted in the treatment of cases coming under my observation. The first thing I insist upon is, absolute rest in bed for at least five days. I always add "Unless you want to join the Kaiser and the devil by having crepe on the front door." This stirs the imagination and excites a willing disposition to follow orders. No food of any kind, liquid, solid or otherwise for forty-eight hours or more. Especially is this rule enforced if fever is present, as food will only aggravate the

fever and increase abdominal pains. As a matter of routine, I order a saline laxative or Pluto water every morning to open the bowel. If this fails, the lower bowel is immediately freed by administering a saline enema. It is advisable to keep the bowels open daily. This method of procedure will be found superior to drastic purgatives. I always impress on the patient's mind the great value of drinking an abundance of water. If lemonade, orange-juice or weak tea are agreeable, these may be given. A warm sponge bath, two to three times daily and followed by a brisk rub with a Turkish towel, soothes the nervous system, reduces the fever and makes the patient feel refreshed and hopeful. Alcohol may be used but, as this is scarce at present, plain water will be found of equal value. Keep the patient out of the way of draughts, for, I am of the opinion that a closed room is better than an open one. The room may be aired several times during the day. The windows should never be opened in the early morning or during the night. A small fire should be kept in the house to dry the air, but, never have it so hot as to cause discomfort to the patient. If headache is present and unbearable, I have found that phenacetin may be administered to give temporary relief, without danger of inducing delirium, providing small amounts are given and its use is discontinued within a few hours.

If fever is high and constant, acetylsalicylic acid may be given for the first or initial doses to cause a general sweating and to reduce the temperature; this, however, must not be given for too long a period.

As the inflammation develops in the respiratory tract, I have used the following with especially good results; calcium iodized gr. 1; sodium salicylate, grs. 3 in capsule or mixture. This is given continuously every three hours until the fever abates. The dosage of this mixture is regulated to suit the age of children, in whom I have had excellent results. I believe that fasting is better than feeding the patient. I have been able to allay the most severe and treacherous rise of fever by adhering to hydrotherapy and starvation.

Should cough become severe and a sense of tightness, soreness and tugging develop over the chest, a counterirritant is indicated and should be immediately applied

to abort the bronchial inflammation and to prevent any chance of secondary pneumonic congestion. For this purpose, I prefer the old-fashioned mustard poultice applied lengthwise from the larynx downward to the stomach. It should be left on until it becomes unbearable. This should again be resorted to at any time during the illness, if indications arise for its use. It is a good routine practice in all cases having fever, to recommend the use of a cotton jacket and camphorated oil applied to the chest. Counterirritants, withdrawal of blood, and saline transfusion may be resorted to where necessary. When the temperature becomes normal, the sodium salicylate is discontinued. However, the use of iodized calcium is kept up and strychnine is added for its tonic effect. This seems to do more good for the general weakness and debility that follow than do alcoholic beverages. After a few days, the patient having regained part of his former strength and appetite, I find a meal of rare steak seems to be preferred to any other sort of meat.

I am of the opinion that all cough sedative are contraindicated. Do not stop the cough, but, give expectorants to loosen the secretions and allow nature to eliminate them. To stop the cough is, to stop expectoration and increase the chances of a complicating pneumonia. Iodized calcium loosens the secretions. Give it freely.

The course of the disease is variable, but, I have had no cases showing active symptoms after the fourth day of treatment. Other physicians who have resorted to this method of handling their cases, have reported to me that the duration of active symptoms had been the same as in my experience.

In conclusion, permit me to say that quick and sensible recognition of the condition, the immediate ordering of the patient to bed, and an early regular and progressive line of treatment will lead most cases to a favorable termination.

Abstract of Discussion

Dr. Lydston: My interest in this subject is not special; rather, general. But, I have had the opportunity of seeing a few cases and witnessing a few necropsies on victims of this so-called influenza epidemic.

Regarding the nomenclature, I presume, that the appellation "Spanish Influenza" is due to the fact that the first epidemic that was recognized as influenza actually originated in Spain, in 1624. But, long prior to

that time, as far back as the latter part of the 14th century, there occurred epidemics in Europe of what was called the "sweating sickness" which some of our modern writers have supposed to be the forerunner of what we now know as influenza, though it was not typical, as we knew it in the previous epidemics of influenza, nor as compared with this recent epidemic of so-called influenza. This naturally would be expected from the fact that, whatever the origin of those epidemics may have been, the characteristics would not necessarily remain the same. This is apparent to anyone who believes that the evolutionary theory applies to microorganisms as well as to other phenomena of organic life.

I do not believe that the fact that the phenomena of the recent epidemic did not exactly correspond to those of previous epidemics necessarily proves that they are not the same or, at least, were not the same in origin. History shows very positively that great wars have been associated with, and followed by, epidemics of various kinds and it shows, too, that there have been variations in type of epidemics of absolutely similar origin.

The idea that some atmospheric influence, something dissociated from the germ explanation of infection or of epidemics in general, underlies such epidemics as this recent one of alleged influenza was, as some of you may recall, promulgated by Wagner many, many years ago in his work on pathology under the caption of "The Epidemic Constitution of Disease."

I think that sometimes we, possibly, are greatly at fault, speaking in an unconventional way, in picking out a three-cornered disease, seeking a three-cornered germ to fit it, then hunting for a three-cornered club to kill it with and forgetting many of the excellent ideas that our medical forefathers promulgated and some of which were very, very sound and practical.

I remember being very strongly impressed by Wagner's observations on the epidemic influence in disease and I always have felt that much that he said was sound and, perhaps, might well be remembered by all of us who consider ourselves modern and up to date.

Now, the view that some chemical constitution of the atmosphere underlies the recent epidemic would be very hard to disprove—quite as hard as it would be for Dr. Croft to prove it; almost as hard to prove as the popular notion entertained at the Chicago City Hall that tobacco-spit is the cause of influenza.

Even admitting, however, that some peculiar chemical constitution of the atmosphere is the basis of such epidemics as the one we have just gone through, it does not disprove, necessarily, the importance of germs of various kinds in the pathologic complex known as influenza. Dr. Croft, himself, inadvertently admitted this in the course of his paper. He asserts that the funda-

mental cause is some peculiarity of constitution of the atmosphere, then, proceeds in the next breath to show that in the course of the disease mixed infections of various kinds develop with consequent pathologic phenomena.

Dr. Croft thus has admitted the importance of germs. This, of course, does not necessarily prove that we are in a position to cure the disease or prevent it by any kind of vaccines—nor does it disprove it.

I occupy something of middle ground on the vaccine-therapy proposition. I believe that, in vaccines, we have a very valuable therapeutic resource, but, I think that, as yet, we are just on the threshold of our knowledge of vaccines in the treatment and prevention of disease. I fancy that, as time goes on and we understand more thoroughly the selection of the proper vaccines and the dosage of administration and the conditions under which they should be administered, some of us, possibly, may acquire more confidence in vaccines than we have now.

On the other hand, I have suspected that, sometimes, vaccines are chiefly valuable in keeping the surgeon or physician busy and the patient amused while nature is taking care of the disease. I suggested to one of my friends today that the best treatment of acute gonorrhea was vaccine. He said, "What kind?" I said, "Made out of sterile distilled water."

Doctor Croft brought out some other rather interesting points in connection with the morbid anatomy of the disease. He laid stress upon edema of the bronchi and edema of the lungs as one of the important factors. In the few cases that I have seen *post mortem*, those happened to be the predominating factors. Whether the cases were typical or not, I am not prepared to say, but, they certainly presented the same characteristics that a large proportion of them do on necropsy.

In viewing these postmortems, I was unable to see much difference between the so-called patchy pneumonia that develops in connection with the pulmonary disturbance of the so-called influenza and what we used to call lobular pneumonia. I think most of the consolidated areas are what we used to call atelectasis and the true lobar pneumonia that develops, it seems to me, is a sequence rather than a characteristic of the disease itself.

Reverting to the edema, I think it was Doctor Richardson of Boston who, in connection with a necropsy on a typical case (or what he termed a typical case) of this so-called influenza said, "These patients drown; they simply drown. The hemorrhagic edema of the bronchi and the pulmonary structure is the cause of their death."

We can easily understand that the other phenomena that occur, the cyanosis of the skin from imperfect oxygenation, hemorrhages, and so on, might rationally be explained by the obstruction of the lungs produced simply by the hemorrhagic edema.

To me, however, the hemorrhages seem to be due to two things; viz: first, the purely mechanical conditions present and, second, to toxemia. I have had occasion to see in consultation several cases of hemorrhage from the kidney and bladder occurring as a complication in the course of influenza, so that I speak advisedly on this particular point.

The one thing that has impressed me, gentlemen, in this epidemic is this: If there ever was a panic-stricken lot of people in the world it has been the medical profession. It seemed to me that we took it for granted that, inasmuch as we had no specific vaccine, we were at the end of our Latin and the patient either died or got well in spite of us. Thus, we became fatalists. I think most of the general practitioners who were thus panic-stricken forgot that they were pretty good doctors before influenza ever was heard of.

Now, if we are going to be panic-stricken in epidemics such as the recent one under consideration, and forget the sound, rational principles of therapy that we apply in other conditions, we certainly are not going to improve the mortality record and I believe that you all know it to be a fact that the profession in general has been pretty panicky in the course of this epidemic.

Some of the edicts and some of the advice and wisdom that has emanated from the Health Department is very suggestive of panic. I presume it might be argued now that, because smoking was prohibited upon the street cars and elevated and railroad trains, it is easy to explain why the epidemic has subsided.

Of course, the facts that, first, an epidemic does not necessarily hit the entire community but may spread in waves and perhaps circles that extend a certain distance and then stop and diverge in some other direction; second, that an epidemic picks out those that are susceptible and misses those that are primarily immune; and, third, that having picked out all the susceptible ones and killed off all those that could not resist, the epidemic after a while stops, would be no argument with some people.

It is suggestive along the lines that the doctor has outlined here this evening, that they are having trouble on the Pacific Coast—in Los Angeles for example, California is supposed to have a wonderful climate (in fact we native Californians claim there is nothing in the world like our California climate and we don't want you to say that it does not cure everything, or, better, prevent everything). All the same, they are having more trouble in Los Angeles than we have had in Chicago.

One point that might have been brought out—with reference to the contagiousness of this disease is, that it moves rather faster than people move. It moves rather faster than could be explained by contagion in the ordinary sense of the term. It takes wonderful jumps. For instance, I heard

from some friends of mine in the East, the other day, who were living on a little farm very remote from any populous center, people who were not in the habit of going to the city at all but just lived in an old-fashioned, Yankee, New England way on that farm. The husband and wife were attacked with influenza and the wife died. There was no possibility, so far as could be learned, of any contact with any cases that would have afforded contagion.

Now, we have innumerable similar examples and it seems as though the theory of contagion does not explain it at all. Whether we can prove that some influence in the atmosphere explains it, is an entirely different proposition. That some occult atmospheric condition exists that produces a lack of resistance and a susceptibility to such conditions as the recent epidemic of influenza, or whatever it may have been, is quite likely but it would be a difficult thing to prove.

It is not surprising that epidemics should arise in army camps. It is stated that our soldiers are taken such excellent care of, housed, fed and clothed so well that the conditions in the camps couldn't possibly explain it, but, all the same, the "crowd-influence" is a very important thing in all epidemics and it is something that we should not lose sight of.

Laying aside the crowd-influence in the case of army camps, there is no use saying that they haven't had considerable trouble. A surgeon friend at Camp Devens, Massachusetts, said to me, "We are just simply overrun with it down there. There were 7,000 cases when I left, with pneumonias galore."

Now, that was a pretty serious proposition. That meant 7,000 cases just at that time; which means that there must have been an inordinate number of cases during the prevalence of the epidemic. The Government issued reports to the effect that: "We have this under control, we've got it licked out." The Health Department said we had it licked out in Chicago. Yes, a fire is "licked out" too, when it has burned up all the fuel; and it is just about as sensible to say, we licked the fire out, after everything is burned up, as to say, we licked out this epidemic. It burned itself out. So it was with the "flu" in the army camps!

To revert to the excellent treatment of our soldiers: A human being is very much like a tree. You remember that landscape gardeners, at great expense and bother, planted a lot of trees down in Grant Park—trees pretty well grown, very expensive trees that cost the city a good deal of money. It was said that the gases from the Illinois Central locomotives killed them.

Those of you who saw the filling in of Grant Park know something about the soil. But, there is something else. If those trees had been seedlings, costing about two cents apiece, if they had had a little black earth planted about them and had been

kept properly irrigated, most of them would have lived and we'd have had some foliage down in Grant Park now instead of a desert waste.

Any gardener will tell you that a little bit of a tree changed from the environment in which the seedling grew will do much better in a strange environment than will one half-grown. Why isn't the same true of the human being? The Government may be perfectly satisfied with the way it treats its soldiers, but, they are not living under the same environmental conditions as at home.

Think of how many of them have lived in heated houses, furnace-, steam-, hot-water heated houses. Look at these Jackies on the streets with their lowcut blouses, without overcoats, when a light overcoat is very comfortable to the rest of us, and I think you will see the point.

They haven't the same food; they are crowded; there is the element of contact, intimate contact with others. You remember, at the beginning of the war they were putting about eight men in a tent when they should have had two or three until General Gorgas finally decided that they needed more space, that a soldier needed quite as many cubic feet of fresh air as did the average citizen.

Now, under these conditions it is reasonable to suppose that germ life would be likely to thrive. Germs that were previously innocuous would not only thrive and wax fat and multiply but would acquire new properties.

Therein lies the chief weakness of the Doctor's chemical view of the etiology of Influenza, because, no matter what the primary cause may be, once the soil is changed, the germ changes, multiplies very rapidly, and adapts itself as fast as may be. If it does not adapt itself, it dies. By and by you have an intense cultivation of organisms that possibly may carry contagion, may even have specific pathogenic properties. These things really are worth considering.

I firmly believe that all of our epidemics as far as we can go back into history, are explainable on a purely evolutionary basis. I never believed in the specific origin of any germ whatsoever. I don't believe in it any more than I believe in a specific creation of any organism whatsoever.

I don't believe that germs were created at all, much less at any one particular time. If we accept the theory of specific creation of germs, we must accept the theory of specific creation of all animal and vegetable organisms and, beginning with Adam and Eve, we will recall that the only habitat for certain diseases at that time would have been the systems of Adam and Eve.

Now, as gonorrhea is a purely human disease and as chancroid is a purely human disease, and syphilis is a wonderfully humanized disease, and leprosy, scarlet fever and measles and a few other things, are

human diseases, Adam and Eve must have had a lovely time.

As syphilis and gonorrhea are not particularly favorable to fertility, we can easily see that according to the theory of specific creation of disease, not only are we not here but our forefathers never were born because Adam and Eve must have been sterile.

It is not for me to comment particularly on the therapy that Doctor Croft has outlined. There is a lot of common sense in it. I would, however, take exception to his view that the proper way to get the fear of the "flu" out of a man was, to throw another scare into him.

The thing that impressed me most regarding his therapeutics was, a lot of common sense that every general practitioner should have. The general practitioner does not always put into practice what he really knows. He does not always take the best advantage of his own practical knowledge and experience, especially if he is in a panic. Because he does not know the specific cause of a disease, because he does not know any specific organism as the cause of the disease, or any specific remedy to kill that organism, once he finds it, is no particular reason why he should lie down and forget to treat the patient for what ails him.

I wish to reiterate what I said about the morbid anatomy of these cases, the so-called typic ones, and especially with reference to the hemorrhagic edema and the patchy pneumonia. As I stated, I can't see any difference between that and what we call lobular pneumonia, with the exception that there is a greater tendency to hemorrhagic areas here and there than in the ordinary type of so-called broncho- or lobular pneumonia and I believe that the mechanical condition is essentially the most severe and important condition with which we have to deal.

The fact that these cases either die or get well very quickly, that there is not a particularly prolonged period of convalescence, even though they are left weak afterwards, suggests that there is some condition other than a secondary bacterial toxemia underlying the pathology.

The President, Dr. Lilly: In view of the wonderful results that we have heard, I think somebody else ought to tell us a little about some bad results in this epidemic. Doctor Croft had 500 cases and nobody died. Another physician reports 1,100 with 2 deaths. I had to sign two death certificates this morning. I'd like to hear somebody else. My mortality has been enormous and from the death list in the American Medical Association, among the doctors, the mortality in general seems to be enormous. I thought I was getting just an ordinary number of deaths, but, from these reports I have had a terrible mortality.

There were two doctors who died at Michael Reese Hospital, young, robust men.

We lost one at Mercy and, as far as I could see, I went through the thing myself—I had three weeks of it and I was scared to death. Dr. Lydston talked about the medical profession being scared—well, I was scared to death. I was afraid to turn over in my bed and the mortality among my patients certainly has been very high.

A great many of the "flu" cases developed into pneumonia. Of course, a great many were just ordinary influenza and, if they didn't develop pneumonia there was a very slight mortality, but, where it did develop (I speak of the mortality in general at Mercy Hospital) the mortality was enormous.

The treatment that we used has been "fresh air," in contradistinction to Dr. Croft. We have had the windows of the influenza ward wide open and the patients have a circulation of air right across them. We have had blankets pinned around their chest and caps on their heads, but, they have been virtually outside.

In the early stages, before there was any pneumonia, the patients were given small doses of aspirin, grs. 2 or 3, phenacetin grs. 2 or 3 and a little quinine, gr. 1 or 2, every four hours and, of course, the general hygiene was looked after, the bowels were moved.

The patients were fed, however—they were not starved. In fact, we rather pushed the nourishment in the shape of milk and cream and if the cough was annoying, they were given liquor of terpin hydrate and codeine, about gr. $\frac{1}{8}$ or $\frac{1}{4}$ of codeine every four hours, or then muriate of ammonia and codeine every four hours. When, with pneumonia, signs of cardiac failure occurred, they were stimulated in the ordinary manner by means of digitalis in the presence of fever. As far as I know from the use of the drug, I have never seen any special effect on the heart.

We have used caffeine, sodium benzoate and strychnine extensively, but, no alcohol, and our mortality has been very high. Just as Dr. Lydston states, these patients drown.

I went up to Ward D the day before yesterday and, the day before that, I had a patient with pneumonia in very good condition. Yet, she was drowning and was dead eight hours later.

Dr. Gregory: I think we all must admit that the medical profession has been in a panic during this epidemic. I haven't varied my treatment of bronchopneumonia in this epidemic from that which I employed in the last five years.

The fellow that speaks last can always tell the best story. I don't recall of signing a death certificate for pneumonia in five years. I have a general practice and, during this epidemic, I have been busy. When I am called in to see one of these cases I find my patient overwhelmed with toxins. At the beginning, I made many smears of the throat. I found that my patient was sick in proportion as I found the pneu-

mococcus, the staphylococcus or the streptococcus.

The first thing that I ordered was, castor oil. I have ordered from two to four doses of castor oil in the first 48 hours. I order a cupful of hot water every two hours, beginning one and a half hours after the oil. I have ordered iodized calcium gr. 1 every two hours, taken usually at the time that I give the hot water.

Absolutely no food for from two to five days. One patient, that I recall now, went seven days without any food whatever—except hot water and fresh air.

It seems to me that the castor oil removes more toxins from the system than any other medicine that I have been able to find. It begins at the throat and doesn't end until it goes through the 20 feet of intestinal tract. I use the hot water in preference to cold, because I had my son, who is a medical student, figure out how much heat it required, that is to say, how much energy it required to raise a cupful of water about 50 degrees in temperature, which is the average difference between the temperature of the body and of the average drinking water. I was astounded at the result of this calculation.

I felt as though, if I could save that energy and heat for my patient and let nature use it, instead, as she wanted to in fighting the infection, I was helping her along in that way.

I did not, during this epidemic, use more than one dose of opium for any symptom that I had to treat. I was called in to see one patient with a temperature of over 103°. She was sitting in her dining room. She couldn't move. She was exceedingly hysterical. I didn't have the three-quarters of an hour required in order to treat that hysteria. So, I gave her a hypodermic of morphine and then I started in upon my regular treatment.

I didn't use one tablet of aspirin, nor did I use any digitalis. After my patient was convalescing and the fever had subsided, I used a little strychnine. Sometimes it was for the psychological effect, just a small dose of strychnine.

I believe that from two to four doses of castor oil in the first 48 hours, a cupful of hot water every two hours, iodized calcium, gr. 1 every two hours, no food from two to four days, and fresh air, meet all of the indications that we have in this present epidemic, better than any other therapeutic combination.

Dr. Leonard: I just wish to speak a few words about Dr. Croft's treatment which, I think, is very sensible. I believe that, in all febrile toxic conditions, elimination is the keynote and, whether you eliminate with castor oil or whether you do it with a good expectorant or anything else, that is the idea, just as much as if you had a thorn in your foot, to pull the thorn out, or if you had a boil on the back of the neck, to cut it open; not, to bandage it up so that the

pus couldn't escape. Persistent elimination is the one important factor in all those conditions.

Dr. Pechous: Our line of treatment varies very little from the ordinary treatment. We have heard here tonight that we might have used other drugs that were suggested; but, of course, in an institution like ours, we are limited to the drugs that are furnished us. Of course, we get the ordinary ones, but some drugs, for which we probably have a preference, we can not use in an institution of that sort.

As for Dr. Croft's theory about the air transmission, the change in atmospheric pressure, gaseous elements, etc., there seems to be some plausibility to it. Of course I don't think we can exclude the theory of germ infection here although we cannot prove any definite germ, and it seems that there must have been something unusual in the atmosphere to produce such great variety in the attacks.

That is to say, as Dr. Lydston has mentioned, such large gaps in between areas where you'd have influenza in one spot and then go for miles before you get another case. It seems that this must be something unusual, something that we cannot grasp; to transmit these germs or whether it was; an atmospheric condition weakening the person; and, the ordinary germs that we have in our mouths and nasal tracts getting a better chance to grow. Of course, all this is only a guess and has yet to be proved.

So, there probably is something in the theory of an atmospheric condition and, may be, some conditions we haven't been able to meet yet, certain conditions of cultures that we have not been able to reach yet, and, for that reason, we have not been able to bring out the germ as well as we would like to.

Dr. Kruk: As to contagion, my observation is, that all the nurses that had contact with these patients got the "flu," so, there must be some contagion. All the help that we had assisting the nurses with these patients got the "flu." Where it came from, I don't know. I don't know if it is in the air or in the contact. I think it was contact.

I have got away from it because I was very careful about it. Sometimes I wore a mask—but, sometimes I didn't. So, I don't know. As to Dr. Croft's theory, I couldn't disprove it but, my opinion is, that contact with the patients, especially if they are in the early stages, the second and third day when the majority or all of them cough, conveys the infection.

Dr. Schneider: As to the possible cause of this trouble and its dissemination, I haven't any experience in treating these cases as I am just a specialist and am a health officer in Winnetka and Glencoe. As health officer in Winnetka, I have noticed the disease developing since about the second week of September. That is very much

earlier than we have had any experience in Chicago.

We began to get our cases within three or four days from the time they developed their first case at the Great Lakes and the first twenty cases that we had were directly traceable to the infection from that source. We had, in Winnetka, an entertainment for the sailors; dances and social functions where they were invited, and the first few cases that we got were due directly to the fact that some of those boys became ill during their visit in Winnetka, and, in other cases, through the fact that those boys had been there although they went away before they got it. Then, also, men working at Great Lakes came back and forth between those communities. The second week in September, we figured about twenty cases. The following week there were about a hundred cases and I got in communication with Springfield; yet, it was not until after that they began to realize that we really had a problem there to solve.

After that, we kept a very accurate count of the cases and, the first week after we kept count, about 25 to 50 cases a day developed. Now, my observation is that, in view of the fact that those atmospheric conditions must have been the same at the Great Lakes and those North Shore towns and Chicago, (at Great Lakes the trouble developed in September)—we kept it confined up there pretty well and it didn't begin to develop in Chicago until pretty nearly the first of October.

Our patients were all isolated and rules were followed as carefully as could be; the infection was eliminated to the extent that now we are only getting one or two cases a day and some days have escaped without any.

Now, the other point; nothing has been mentioned in connection with the blood findings. It has interested me to find, in talking with men that have treated patients at Great Lakes and also with the doctors in our community who are making blood examinations finding a decided leukopenia, that the white blood corpuscles are in some cases diminished to less than a thousand. They have found in those examinations of blood, at the Great Lakes, that they could predict two or three days in advance those cases that would not recover because they were the ones where the leukopenia developed to such an extent that one could find no remedy for it.

Dr. Rogers: I am a veterinarian. We have a disease in horses and have it right along, known as influenza. During the last month, I have come to a certain conclusion regarding our definition of inflammation which, from time immemorial, I think, has been wrong in one little particular. It is always given this way: "Inflammation is the reaction of the tissues to an irritant."

But, I want to ask this question: Has anyone ever seen an inflammation that is

due to an excess of blood in the part or organ? May not the excess of blood in the part itself, by its intracapillary pressure, produce the inflammation?

What I am driving at here is, what conditions there are that can produce that in an organ or in a part, and traumatism in a particular region. If you want to prevent inflammation, the thing to do is, to apply cold at once. To prevent what? The injury is there. There will be reaction but, what you want to prevent is the excess of blood coming to the part.

Now, can a thermal irritant, applied to the surface of the body improperly protected, physiologically, result in contraction of the cutaneous and surface fascia motor fibers, drive that blood inward into the elastic pulmonary system of vessels and be kept there long enough that intracapillary pressure in the elastic pulmonary structures produces the inflammation absolutely independently of any bacteria?

If I should transsect the femoral artery onto the radial artery, the immediate picture that would follow in the hand or tributary area would be an active hyperemia. If kept up long enough we could have a picture of inflammation of the hand of the whole area and on to edema.

This summer, I was going to take, in New York City, one of Mr. Rockefeller's men down to a packing plant to show a certain thing in connection with the lungs, with reference to tuberculosis which has been my particular hobby for some 18 years, and it was the result of a trick played on me in Iowa when I was a Federal Inspector and that I never expected to be of any use until 15 years later. The butcher called to me one day and said, "Doctor, what's the matter with this lung?"

I looked at it. It was a beef lung. It was enlarged, pale and heavy. I had been an inspector a number of years, in fact, had taught inspection, and in none of the literature had I ever seen a lung like that.

Every large, heavy lung I had ever seen was red, hepatized. I looked at it and walked away. I didn't want to display my ignorance. This was a town in Iowa and I thought they might really have had a common disease there that I hadn't heard about.

A young fellow whom I had befriended told me they stuck a hose into the trachea and filled it up, so, I ignored it but here is how it came in this summer: I went down to the packing plant and took two normal hog lungs. I put the hose into the trachea of one and completely filled the trachea and bronchi and bronchioles and alveoli and then I took and massaged that lung with the intent and purpose of working out the lymphatic system in this way: To bring pressure to bear on the alveoli and produce osmosis to the lymphatic tissue, to the outside, and then one to the lymphatic nodes. It worked!

On the other lung, I put the hose into the pulmonary artery on the right side of

the heart filling up the bloodvessels of the lung; and, by the way, I am afraid we are forgetting that the lung is as much a vascular organ as it is an air organ. This particular lung also I massaged with the idea, in this case, of having pressure on the capillaries and osmosis through the capillary walls into that same lymphatic tissue and fill up those lymph vessels and trace it down to the lymph nodes. And it worked!

My purpose was, to show this doctor of the International Health Board, as to the tubercle found in the tissue outside of the alveoli and also outside of the capillaries, that no man lives who can say positively at the necropsy, twenty years afterwards, that it came through the blood route or air route, but, this is what I observed:

I attended a meeting of the medical men here in Chicago and postmortem pictures were given of pneumonia cases out at the Great Lakes, which indicated this edema and pressure and spurting of the serum. Well, I recalled that I had produced that very condition in these lungs and I have no hesitancy in maintaining that I or any of you can take two lungs, take defibrinated blood so as to prevent coagulation, and produce a typical picture of pneumonia, but without the reaction, of course, remaining in the tissue.

There was another thing about the treatment at the Great Lakes. They gave pituitrin. The great-systemic system of blood vessels (and one of the first things we learn in angiology is, the separation of the systemic circulation from the pulmonary circulation) and the subject lacks one essential thing. A cross section of an arteriole in the systemic circulation shows the middle coat containing vasoconstrictor fibers; the pulmonary system of vessels does not contain any vasoconstrictors in the middle coat of the arteries but, what muscular tissue there is in the lungs, is peribronchial and perialveolar.

Now, pituitrin, as you know, acts upon the vasoconstrictors, and they gave it (so they stated) with the intent and purpose of contracting the pulmonary system of vessels and relieving that pressure there, decreasing the quantity of blood. Unfortunately, the very opposite occurred. It was a constriction of the systemic system of blood vessels and drove more blood into those lungs.

You can take a dog and give it pituitrin and produce pneumonia. To me, these two great systems are like an hour-glass. Imagining one part of the glass the pulmonary system, like a rubber balloon, very elastic; the other part like the rubber of a bulb syringe and your hand to act as a vasoconstrictor. The more you have in one, the less you have in the other. Our younger men of today, I believe, do not fully realize, while horse doctors always will remember the counterirritant and blisters that they employed to increase the quantity of blood somewhere else in the

systemic circulation, and you've got to have at least a decreased quantity in the pulmonary circulation.

My work in tuberculosis has led me to this belief, that there is absolutely no disease air-borne or droplet-borne, transmitted from one diseased person to another, and these lungs that we have accused for years of taking in bacteria have actually been doing just the opposite.

The intestinal tract is constantly full of a bacterial flora of all kinds and a constant but variable number penetrate the mucosa, enter the lymph stream and reach the lungs. If they find a normal alveolus coated with mucus, they go on out to the exterior but, if it is preceded by the application of cold externally and improperly taken baths, drafts, contraction of the systemic system, it increases the intracapillary pressure of the pulmonary system, edema (no coagulation yet) and then a forcing it into the alveoli and air striking it just exactly like the cutting of the skin. Now, when air strikes the cut, immediate coagulation occurs, we get a coagulated serum in the alveoli which, to me, are just exactly like so many miniature Ehrlenmeyer flasks.

And now, when bacteria, attempting to pass out through the lung, are thrown out into this, that is a secondary proposition. In some cases, you will get the influenza bacillus; in some cases type-I, type-II, type-III, pneumococcus; and you all know what type-IV is—everything that you can't put into the first three.

Dr. Graves: I came a little late. I don't know what has been said about the prophylactic use of the vaccine. I merely wish to say that I differ in quite a number of cases. Some of those cases have developed influenza, all of them had it mildly. Of course, in comparatively few cases it means very little, but I merely wish to state that much of my experience. I used the stock vaccine consisting of pneumococci and influenza germs. I also saw one patient where we had given two immunizing doses of the new vaccine furnished by the Health Department and who developed the "flu" despite this preventive treatment.

I didn't hear anybody say anything about the gastric and intestinal types of influenza. I saw a good many of those; and very distressing they were. Many of them did not receive any medicine or nourishment or anything else. Of course, most of them got well the same as the others in the degree that in most cases good nursing and elimination, perhaps, was all that was necessary.

I haven't any pet line of treatment for influenza but I really wish to mention that some of the more severe cases were helped by digitalis and I am absolutely positive that morphine did wonderfully well in some cases, giving rest in patients that were restless and weak and throwing themselves around. By giving them a hypodermic,

they got rest which did more good than anything else.

Speaking of producing immunity, you have all heard a good deal about whisky prevention. People in our part of the city have grabbed at that with glad hearts. I don't know if it kept anybody from getting the "flu"; I know that some of them got it but, I am yet to know of one real good old soak that has died of the "flu." I haven't seen any. All the men I have seen die were good, temperate, healthy, nice-living people. I have had a few cases of old people in the 60's and 70's and they have all come through fine, contrary to my experience in other epidemics of influenza, and children have all come through fine. All the children, practically, had nose bleed. I thought that they were better after their noses did bleed and, I believe, if I had a really desperate case again in an adult, I'd bleed the patient.

I had one case that started in with a hiccough the very first day. That alarmed me because I never saw a bad case of hiccough, complicated with pneumonia, that didn't end fatally. I wanted to take the man to a hospital, but, he wouldn't consent. I insisted on a consultation, which I had, and, finally, we did take the man to the hospital but, everything we did had no effect on him, he lost continuously for five days and gradually developed bronchopneumonia and died.

I had several cases that developed a regular lobar pneumonia after anywhere from a week to ten days. Most of them were very ill, one patient died. I had one case where pneumonia developed very early, in a woman that I think was tuberculous. She died right away.

In our neighborhood and around the city, as far as I have heard, practically all the people that have died have been under thirty years old.

Dr. Harry L. O'Connor:—I was more than glad when the opportunity presented itself, through Dr. Croft's request, to make a bacteriological survey of his cases, having previously entertained the desire to study the etiology. In the way of a summary, I wish to state that I selected 300 sputum specimens, in such a manner that I had practically equal numbers from cases with and without fever, but, with the general signs of weakness, pains in back and stomach and tugging in the chest. The sputums were all portions of 24-hours' expectorations and were mucopurulent and, occasionally, tinged with blood. Two direct smears were made of each sputum, one stained by the dilute-fuchsin method and the others by Gram's method using Pyronin-methyl-green. Culturally, three implantations were made, two on pigeon's hemoglobinized agar and one on human hemoglobinized bouillon. In each instance, a number of specimen-lumps in the sputum were placed in sterile water and shaken in

order to break them up prior to the inoculation process; 0.1 mil of this sputum-water was added to each bouillon tube and to one pigeon's hemoglobinized agar plate. A slanted agar tube containing pigeon's hemoglobin was inoculated with the pure sputum. In one of these inoculations and smears, no bacterium of the morphological characters of the Pfeiffer's bacillus were found. A control inoculation of the above mediums with a known culture of the Pfeiffer bacillus gave excellent results. Guinea-pig inoculations from over 25 cases were negative.

Dr. Croft in closing: I want to call your attention to one other little thing. In convalescence, I saw three cases of swelling—one case, a woman fifty-eight years old, got up in the morning complaining of stiffness in the hands; her hands were swollen, but the urinalysis was negative. That disappeared on the third day. Another, a little boy, five years old, after he was up; on the fifty day, his face, abdomen, hands and feet became swollen, urine negative, otherwise felt all right. After keeping him in bed two days, that disappeared. My own little boy was sick. He had recovered, went to school for four days, came home and his face became swollen last Friday, disappeared Saturday and he has gone back to school.

Severe cough—I want to say I have seen several cases where they had that laryngeal spasm with continual coughing; and everybody in the household scared to death. I did nothing but simply apply counter-irritation on the trachea and stomach, and, in five minutes they were relieved.

I have seen several other cases that would be interesting to cite, but, the time is too short. In regard to Dr. Gregory's statement about not feeding for six or seven days, that is my own experience. My own boy didn't receive food for six days.

As to elimination, he has been using castor oil and some of my patients have been using that; but, I usually adhered to the Pluto water or saline laxative. If the bowels didn't move each day, I had them use an enema. I had one case, a woman sixty-six years old of the febrile type, with chronic myocarditis, that made a recovery. One other, a case of chronic asthma, where the woman had to sit up in bed, with a terrific cough, but who was up on the fourth day and made a good recovery.

If this disease was contagious, why didn't all the doctors and all the nurses get it? The few that had it became over-exhausted, exposed and were subject to draughts.

In regard to the peculiarly "furred tongue" which I have noted as apparently premonitory of so-called influenza: I have noted the same phenomenon in a large number of individuals in whom I have been unable to follow it up with reference to subsequent conditions.

A Study of Influenza and Epidemic Pneumonitis

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MUCH has been written recently in *The Lancet*, *The British Medical Journal*, *The Journal of the American Medical Association* and in numerous others concerning the terrible pandemic of epidemic pneumonitis and so-called Spanish influenza. Physicians, the large hospitals and the other institutions usually given to careful study of their various cases that are followed from beginning to end, were compelled to devote all their time and facilities to handling the large volume of work—of treating hundreds of patients in a great emergency; and, therefore, had to forego any very complete studies, autopsies, and so forth for the present. More will be learned later, no doubt. Some facts can, however, well be brought forward now, even though they be more or less a review of what may be well known.

The recent outbreak of what appears to be a new virulent or malignant form of influenza, so called, has in a large majority of the more severe cases been associated with a pneumonia, usually of the bronchopneumonic type, but also frequently with an atypical lobar pneumonia. So often has the pneumonia been a part of the disease, that I am led to believe that the pneumonitis was not a complication, but actually the disease or a very serious part of the disease.

Dr. Henry A. Christian did not fail to find evidences of pneumonia in a single case of a series of necropsies, and he states that, virtually in all fatal cases of epidemic influenza, there is a pneumonic process in the lungs before death. He believes that all patients that died, died of "bronchopneumonia and epidemic influenza." In 26 consecutive cases studied by him, not a single patient failed (ante mortem) to show physical signs of bronchopneumonia. Of course, there were, no doubt, many mild cases that really constituted only an influenza or an attack of epidemic grip (Holt).

This epidemic came upon us very suddenly, and was probably brought here by ships coming to Boston. The disease prob-

ably started in Spain, just as the pandemic of 1889-90 probably began in Russia. It is not yet known whether these two epidemics are due to the same identical disease—certainly the mortality rate of the 1918 pandemic far exceeds that of 1889-90, although the morbidity rate of the "Russian" epidemic was greater than that of 1918 had been.

The recent epidemic disease was extremely contagious—several members of a family being affected and in many instances all the members down with the disease. In numerous instances, attendants, nurses, doctors, were stricken shortly after a first and limited exposure to droplet infection.

The Etiology

The exact cause is not known. It may be a mixed infection with several organisms of more virulent strains—including the bacillus of influenza, the streptococcus, micrococcus catarrhalis, pneumococcus, and others.

In the great majority of cultures made by the Department of Health Laboratory from a large number of my cases, the streptococcus was the predominant or only organism isolated. In a few, there were present the micrococcus catarrhalis, and pneumococcus and in only four was the Pfeiffer bacillus found. Of course, this does not necessarily mean that the B. Pfeiffer was not present in some of the other cases, as it may have been very difficult to isolate the organism by the cultural methods used, or the cultures were taken from parts not infected with the influenza bacillus at the time. In some cases, cultures showed only some small gram-negative bacilli—with or without other organisms, such as the streptococci or micrococcus catarrhalis. Blood cultures were all negative.

Symptomatology

The disease manifested itself, in a typical case, with abrupt onset, as strikingly sudden. After an incubation period of one or two, or at the most, three days, the patient would be seized with severe body

pains, headache and chilliness and at times would even collapse and fall to the floor.

The three commonest and earliest symptoms in many of my cases were chilliness, diffuse headache and backache, and then nosebleed. Then the patient would complain of general malaise, and an uncomfortable feeling of tightness and soreness in throat, nose and chest, with a slight dry cough. On the second or third day some of the patients would be a good deal worse, others would be feeling better. In some cases, there was a great desire to sleep the whole day and in some of the cases this somnolence was the chief symptom throughout the attack.

There seem to have been two distinct types of cases—those whose chief complaints and fever kept up for about three or four days and those whose fever, and pains, somnolence, photophobia, and cough, etc., would keep up for six, seven or eight days. So much for a brief description of the bulk of my cases.

The general symptoms at the onset of the attack were as described. Other symptoms that occurred in some patients were as follows: very severe backache, almost similar to lumbago or one of the other acute infections, such as smallpox; sweating, insomnia, flushing of the face, epistaxis, anorexia, hoarseness, dysphagia, sore throat, fever of 102-106° F.; the pulse ordinarily appeared to be relatively slow (as compared to temperature)—similarly to the observations made in the pulse-temperature ratio of meningitis, typhoid fever, malaria and yellow fever.

Cough was frequently followed by bloody expectoration, at times almost pure blood, at others a bloody fluid would be brought up, much thinner than that seen in cases of typical lobar pneumonia. Some patients vomited, in several instances the vomitus was bloody or coffee ground in appearance. Some patients had severe cramps in abdomen with tympanites.

Physical Signs

The liver was enlarged in many of the cases. The cardiac dullness was increased in a fairly large proportion of the cases. The heart sounds were muffled and without tone. Blood pressure was low, both systolic and diastolic, especially the diastolic (auscultatory).

In some cases, the lungs gave evidence of trouble very early in the disease. Numer-

ous fine râles could sometimes be heard on the second day—with this one might get, on percussion, evidences of impairment and, at times, distinct consolidation, especially at or near the base of one or both lungs, most often over the left lung at first. At this stage there would also be tubular or bronchial breathing. However, the majority of the cases of epidemic pneumonitis failed to present the classical signs of typical lobar pneumonia. As a rule, the cases were chiefly bronchopneumonias and, in some instances, one could easily detect, on careful examination, an area of typical lobar pneumonia near the angle of the scapula or the base of the left lung, and distinct areas of bronchopneumonia in the other lung. Both lungs were distinctly involved in a number of my cases. In some of these cases, the respiration rate was not especially high. Pleural effusion was apparently rare, although a number of the cases had a definite pleuritis with the attack of influenza.

Many of the women who were down with the disease had their menstrual periods whether they were due or not. Many cases of miscarriages and abortion have been reported by physicians—and in some hospitals nearly all the pregnant women who had the disease miscarried or aborted. A large, indeed, a very large percentage of the pregnant women who were taken down, died early in the attack. Some hospitals report a 100-percent mortality in the pregnant women, others a 40 or 50-percent mortality. The influenzal pneumonitis was particularly fatal among the young adults between 20 and 30 years of age.

The negroes seem to have escaped the disease—at least in the Northern states. The very old and the very young also showed immunity against the infection. Only a comparatively small number of persons over 45 years of age were attacked and comparatively few children under 6 or 8 years were affected. In the epidemic of 1889-90 old people were also attacked.

Peculiarities and Observations

Convalescence is slow; the majority of patients do not recover their strength for 8 or 10 days or more after getting up.

The most characteristic physical signs appear about the end of second day or early on third day—namely, (1) A toxic appearance. (2) Heavily coated tongue and peculiar odor ("sweaty") about pa-

tient. (3) Injected conjunctivæ and evidence of acute inflammation of whole mucous membrane of mouth, tongue, gums; the nasopharynx is congested, and the gums bleed easily. The breath is foul and heavy. (4) The temperature is highest at this time. The highest temperature recorded in my cases was 106 1-5° F., in a small boy. This temperature dropped promptly after the use of Combined Influenza Vaccine. (5) Pulse, relatively slow. (6) Death may occur on the fourth or fifth day in the massive bronchopneumonic form. (7) Some bronchitis. (8) Urine is scantier than normal; high colored, and contains albumin in 80-90 percent of cases. Some granular and hyaline casts were found in 40 to 50 percent of cases. Some slight tenderness in the loins may be elicited. The casts were present for very short time. Albumin could be found in traces for 8 or 10 days. The splenic enlargement so often noted in the 1889-90 epidemic was not present in this 1918 type. Another peculiarity that might here be noted is the presence of a leukopenia at the height of the fever, 3000-4000 white blood cells per cubic millimeter. By the fourth day, a moderate leukocytosis was present. It is stated by Gotch and Whittingham that a marked relative neutrophilia during the leukopenia was observed, followed by a slight increase of the small lymphocytes after which the leukocytosis set in, as shown by daily differential leukocyte counts.

In cases of true Pfeiffer's bacillary influenza, there was leukopenia followed by leukocytosis, but the leukopenia was accompanied by lymphocytosis and the leukocytosis by neutrophilia. Such a blood picture as that seen in the present epidemic, strongly suggests a micrococcal contraindication to a bacillary infection. There is a marked fall or almost total absence of eosinophile cells during the fever. In malaria, at the height of the fever, there is a leukopenia with a relative neutrophilia and followed by a mononuclear increase in a few hours. Influenza may occur in an old case of malaria and, in such an event, the mononuclear increase does not appear for four or five days after the height of the fever. Gotch and Whittingham also found all blood cultures negative as did also Nuzum. In the majority of cases there was not much coryza; physical signs, in the

early stages at least, were remarkably few. The facies, apart from the absence of coryza, very much resembles that of a measles patient a day or two before the appearance of the rash.

Cyanosis was an interesting and prominent phenomenon in a number of the cases. It was a bad sign. There was a dusky blueness of the face, finger nails and whole body. The face and lips were almost blue-black in color. The exact cause is not known. Some men attribute it to right-sided cardiac dilation, others to respiratory failure or "water-logged" condition of the lungs (pulmonary edema) and still others think there may be some change in the blood itself. Dr. David Riesman attributes the cyanosis to some methemoglobin disintegration and likens it to acetanilid- or gaspoisoning. He considers that it is neither a cardiac nor a pulmonary cyanosis but a "hemo-cyanosis." Dr. Riesman also calls attention to the fact that there were few cases of other forms of acute illness, during the epidemic wave. He says the infrequency of other diseases during the epidemic, such as follicular tonsillitis, is a curious fact. Another striking circumstance in this epidemic was the great number of physicians and nurses who became ill, and the large number of deaths among physicians and nurses from this disease. In some hospitals, 75 to 80 percent or more of the nurses and residents were ill with the disease.

Herpes was infrequent, certainly much less common during this epidemic than in the usual forms of grip and influenza, meningitis, malaria and pneumococcal pneumonia. The great frequency of acute nephritis in these cases has been emphasized by Dr. Napoleon Boston. The absence of a distinct chill in virtually all the cases that went on to a pneumonia is to be noted; there was some shivering or chilliness, but never a distinct chill. Attention has been called by a number of observers, that in Philadelphia, Camden, and vicinity, the left side was most often involved in the beginning of the influenzal pneumonitis cases; especially just above the bases posteriorly and along the posterior axillary line near the angle of the scapula (Riesman). In Boston, the right side was more often involved first. The earliest physical signs were given by percussion (greater resistance and greater impairment, a sort of

wooden resistant note) and auscultation (a shower of very fine râles at end of expiration). Synmiers compares this pneumonic process with bubonic plague (*Jour. A. M. A.*, Nov. 12, 1918, p. 1482).

Dr. Boston states that 90 to 95 percent or more of his patients showed marked enlargement of the size of the heart (dilatation). In my own cases, the diameters of the heart certainly were increased, but not in nearly so large a proportion of the cases. Dr. Boston regularly found the heart dullness to be increased to ten and eleven inches and in only a few of the cases studied by him were the diameters less than ten inches. He believes the cyanosis to be cardiac in origin.

Frequently, even in terribly ill patients, the respiratory rate was slow, and this is considered as a favorable sign by some writers. The appearance of an increased respiratory rate, from 40 to 50 or 60, indicated not only an increase in pulmonary involvement, but also an increased toxemia. A definite air hunger, suggestive of a severe acidosis, made its appearance at times. (Solomon Strouse.) Strouse and Bloch consider an increased respiratory rate, even without elevation of temperature and pulse, as of more unfavorable significance than almost any other sign. These men found an absence of dilatation of right heart indicative of cardiac failure. Another fact, to which I wish to call attention, was the great frequency of nosebleed in my own cases, especially in young children.

Bacteriology and Pathology

Dr. Randle C. Rosenberger found, at necropsy, evidence mostly of an acute condition, dilatation of the heart, congestion, edema and massive bronchopneumonia, also, congestion of the kidneys. In only six or seven cases did he find, from spreads from the throat, a small influenza-like bacillus, but, never in pure culture.

By far the most common organisms encountered by him were, in the order named: pneumococcus, micrococcus catharrhalis, streptococcus and staphylococcus. He did no lung punctures and, hence, offers no statistics of cultures from the lungs.

Nuzum and others report that acute asphyxiative bronchiolitis was present clinically in the fatal cases. At necropsy, the pleural cavities contained blood-tinged fluid varying from 300 to 1000 mls in amount,

Large quantities of blood-tinged, frothy fluid exuded from the air passages. The consolidation was always lobular in type and involved most frequently the lower lobes. Marginal compensatory emphysema presented itself with marked regularity. Large quantities of bloody serum bathed the fibrin-free smooth-cut surfaces of the lung. The right heart was acutely dilated. The liver and kidneys were heavier than normal and the seat of fatty changes and parenchymatous degeneration. Edema of the leptomeninges was not uncommon.

Bacteriologic studies and reports of the pandemic in Europe show that the influenza-bacillus was found only exceptionally while pneumococci, streptococci and micrococcus catharrhalis were recovered with considerable regularity from the sputum-, nose-, and throat cultures. Gruber and Friedmann, in Berlin, failed to find the influenza-bacillus, and report streptococci and pneumonococci as the common agents of the complicating pneumonias. Kolle, in Frankfurt, failed to find *B. influenzae* (Pfeiffer's) in any of the cases which he had examined. As stated elsewhere, Gotch and Whittingham isolated micrococcus catharrhalis with which they claim to have produced the disease in man; whereas, Park, in New York, and Keegan, in Massachusetts, have isolated the influenza-bacillus in a high percentage of cases, in soldiers and sailors. Nuzum and his associates think that the highly virulent strain of pneumococci may be the causative factor in the production of these highly rapid and fatal lobular-pneumonia cases. Cultures taken from some of my cases, and examined and studied by workers in the laboratory of the State Department of Health were taken from sputum, nose, or throat.

The results were:

- 90 cultures showed streptococcus.
- 25 cultures showed staphylococcus.
- 8 cultures showed pneumococcus.
- 2 cultures showed streptococcus and pneumococcus.
- 6 cultures showed micrococcus catharrhalis.
- 6 cultures showed micrococcus catharrhalis with staphylococcus.
- 18 cultures showed micrococcus catharrhalis and streptococci.
- 5 cultures showed micrococcus catharrhalis with a small gram-negative bacillus.
- 3 cultures showed streptococcus and small gram-negative bacillus.

- 1 culture showed staphylococcus and small gram-negative bacillus.
- 2 cultures showed small gram-negative bacillus.
- 1 culture showed streptococcus and staphylococcus.
- 13 cultures were unsatisfactory.

184 therefore, a total of eleven (11) cultures show a small gram-negative bacillus.

3 or 4 showed Pfeiffer's bacillus with or without other organisms (streptococci).

So that, out of about 185 to 190 cultures, the streptococcus was present alone or with other organisms in about 122 cultures. E. Ecker (*Jour. A. M. A.*, Nov. 2, 1918) suggests that the difficulty in isolating the Pfeiffer bacillus, by plating on blood agar alone, was due to the fact that other organisms, such as pneumococci, staphylococci, and micrococcus catharralis, tend to obscure the colonies of influenza-bacillus and overgrow them. Cantani showed that bile did not destroy the virulence of influenza-bacilli. Therefore, Ecker used bile or bile salts, because of the dissolving action of bile on pneumococci and its inhibitive effect on other organisms. He used sodium taurocholate in 0.5-percent solution, mixing the bronchial secretions with it for 20 minutes and, after exposure, streaks were made on human blood-agar plates. The organisms stain nicely with aqueous fuchsin—are gram-negative and often look like *b. coli*.

At Camp Sherman

At Camp Sherman, Friedlander and McCord report that about 11,000 cases of a population of 33,000 (over 33 percent) were taken down with the disease. Of these, over 2000 (18.22 percent) developed pneumonia. Of the total number affected with influenza, nearly 8 percent died (842 deaths occurred in the 2000 cases of pneumonia and influenza). They did not demonstrate the Pfeiffer bacillus as the causative organism. Pneumococcus (IV) was the predominating organism. The pneumococcus was detected in 53 percent of necropsies. The hemolytic streptococcus occurred in 47 percent of thoracic exudates. Cultures from throat and nasopharynx of influenza patients showed pneumococci in 54 percent and hemolytic streptococci in 4 percent of all examined. Cultures from the sputum of influenza-pneumonia cases

showed characteristics of type-IV pneumococcus in 80 percent.

Immunity

An attack of influenza does not afford immunity; relapses are common; the disease increases susceptibility to pneumonia, typhoid fever, tuberculosis, and ear and sinus disease.

Sequelae and Complications

(a) Neurasthenia, and (b) confusional psychoses may follow after attacks of influenza. Two of my patients had (c) paralysis (mild type) of one side: arm, leg, et cetera. One of these, a man of 60, also had a hemianopsia. The other case was that in a young woman, who had a (d) complicating endocarditis (mitral) and, probably, developed the paralysis as the result of an embolus. The old man had some arteriosclerosis and a small hemorrhage occurring into the internal capsule and this probably caused all his trouble. Whether the severe toxemia and acidosis had anything to do with these paralyses, I do not know. One patient, a little girl, who had an attack of influenza and pneumonia four to five weeks ago, developed (e) a meningitis, a tentative diagnosis of tuberculous meningitis being made. The first lumbar puncture gave a clear fluid under considerable pressure, and no organisms could be demonstrated after prolonged search, although about 50 mls of fluid was withdrawn. Wassermann test of the spinal fluid was negative; the Noguchi globulin test + + + + ; cell count 920 per cubic millimeter; polynuclears 70 percent and mononuclears 26 percent. Upon standing, a fine velum developed. At the second spinal puncture, 40 mls of slightly turbid fluid was withdrawn. On this occasion, a purulent sediment formed on centrifuging the cerebrospinal fluid. This fluid showed cell count 2500 per cubic millimeter; 85 percent polynuclears; meningococci were present intracellularly in very small number. 30 mls of antimeningitis serum was given intraspinally by the gravity method. So far, the child has received three intrathecal injections of the serum. (f) Empyema; quite a number of cases have recently been reported by several Philadelphia surgeons. At a recent medical meeting, Dr. Moses Behrend stated that he had operated on 17 empyemas in less than two weeks during the epidemic following influenza. (g)

Mastoiditis; I have not seen a single case during the entire epidemic. I saw a number of cases, though, in which some otitis without suppuration developed and which, therefore, did not demand paracentesis. (h) Appendicitis has also been reported as being on the increase during and following the epidemic. (i) Splenic, renal, pulmonary and cerebral embolism may occur. One of my patients had an embolic splenitis, probably associated with a similar condition in the kidney. (j) Retinitis, with hemorrhage into one or both eyes, may occur. (k) Several of my patients, besides remaining nervous, irritable, and at times melancholy, also complained of an annoying intercostal neuralgia. (l) Dilated weakened heart conditions will no doubt be more frequent for a number of weeks to come, and will be seen by all of us during the coming winter months.

In my own practice, therefore, the most common complications and sequelae were: Pneumonia, pleuritis, otitis, endocarditis,

paralysis, cardiac dilatation, meningitis, psychoses, appendicitis, mastoiditis, splenitis, retinitis, and even insanity. Heart failure was not unusually common.

Acidosis

Palmer, in the *Journal of Experimental Medicine*, states that metabolism during the febrile stage of pneumonia results in the production of considerable amounts of acid substances. The increased ammonia and acid excretion, the low carbon-dioxide content of the blood, the diminished affinity of the blood for oxygen, and the retention of large amounts of alkali, indicate an excessive acid-production during the febrile stage of the pneumonias. There is excreted, in the urine of subjects ill with acute lobar pneumonia, a large amount of organic acid. My own impression is, that the great majority of deaths and various complications were due to the very malignant toxemia and the associated acidosis.

(To be continued.)

After Thirty Years—VIII

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

THE medical code of ethics contains a chapter on the duties of patients toward their physicians, and there is no doubt that such an exposition of the relations that ought to obtain between patient and physician would be capable of doing a great amount of good if it could be brought systematically before the public. But, the difficulty is, how to present the matter. If a doctor tries to tell his patients their duties, it is likely to be resented, because the motive is misunderstood. The laity are quick to conclude that the doctor is talking for his own benefit. Any attempt to give instruction of this nature calls for the greatest tact, and should always be put on the basis that it is possible to give better services if certain principles are observed. It would be practicable to do much in the way of educating the public in these matters through the columns of the newspapers and magazines. There is no reason why the health articles so numerous in these publications should be limited to exploiting

all the latest fads, as many of them are at present.

The various duties of patients formulated in the code of ethics are mainly of advantage to the patient himself, although in helping him they also aid the doctor, by enabling the latter to render far better services, and, yet, with less worry and fatigue to himself.

Changing the Doctor

One of the greatest evils we have to contend with as medical men is that tendency shown by such a large part of the public to skip around from one doctor to another, not infrequently changing several times during one illness. If only people could be brought to see that good service is impossible under those circumstances, a great benefit would ensue both to doctor and patient. Every family ought to have a family-physician and should let him see that they lean upon him and trust him in all matters concerning health. Not only

should they always depend upon him in sickness, but, in health, also, they should look to him as their guide in learning how to keep well.

The principal cause of the haphazard method of employing any doctor happening to be handy is the ignorance of the people themselves; another is that this class of people usually do not pay their bills. They employ one doctor until they have run up a good-sized bill; then a favorite method is, to pretend that the doctor "did not treat the case right", and refuse to pay the bill. In my early years of practice, I received some painful shocks from people of this kind, when I still was simple and trusting and did not think it possible that there were people that would deliberately make a false charge, for the purpose of evading a doctor's bill. But, alas! it would be a kindly nature, indeed, that would not grow somewhat cynical after a life spent in encountering the various sides of human nature with which the doctors do come in contact.

Doctors also are somewhat to blame in this matter. If they would refuse to take a patient that wants to change without good reasons, it would have a wholesome effect. What—a doctor refuse to accept a case as a matter of justice to a competing practitioner? Why, that would be a new thing under the sun! However, it would produce a good effect upon the people and win him the respect of his confrères.

The reasons that induce people to change doctors as a rule are utterly frivolous. The advice of a neighbor who knows nothing about the subject more often than not is the basis for making the change. The patient does not take into consideration the fact that his neighbor has no reliable means of judging a doctor's skill. If he does not get well promptly, it must be the doctor's fault; so, he asks his friend, "Do you know a good doctor?" Really, if he were buying an automobile he would exercise far more care in his selection than he does in selecting the man that will hold the lives of himself and his family under his control! Of course, his friend *does* know "the *very best* doctor in town" and recommends the one in whom he happens to have faith at that particular time. However, the kindly neighbor does not always wait until he is asked, but, volunteers his (or more often her) advice to a family that may have been perfectly satisfied until their

faith was unsettled by the mischiefmaker's tongue. These meddling busybodies would do less damage if the doctor called in to take another's case were to do some questioning, somewhat as follows:

"How long has this patient been sick?"

Ans.: "More than two weeks."

"Haven't you had a doctor?" Ans.: "Oh, yes, we have had three; but, we are not satisfied and, as we have heard of some cases that you cured, we wanted to try you."

"Who are the doctors that you have tried?" Ans.: "First, Doctor White, then Doctor Brown, and now we have Doctor Black."

"What was the matter with Doctor White?" Ans.: "Well, my husband was not doing well, so, we called Doctor Brown, but, he did not seem to help any better than Doctor White. Then a friend told us that Doctor Black was the best in the city and that he had studied abroad; so, we tried him."

"And what was wrong with Doctor Black?" Ans.: "Well, he didn't seem to take enough interest in the case."

And now is your opportunity for a bit of timely, wholesome preaching.

"To tell the truth, dear lady, I'm not a bit surprised that the Doctor did not take much interest in this case. He considered that he would be dismissed in a few days, anyway, and, so, would not have a fair chance. For the same reason, I do not wish to take charge of this case. I want to serve people that trust me and have confidence in me. No doctor can do his best when he feels that people are liable to turn against him at the mere word of some neighborhood-gossip. I know Doctor White. He is a skilful and reliable man. If I were sick, I should be willing to intrust myself into his hands. If you had been faithful to him, he would have done more for you than an endless succession of doctors possibly could do. People that are always changing doctors get the poorest service in the world. Take my advice and try a new plan. Pick out the doctor that you like best in this town and make him your family-physician. Trust him and let him feel that you trust him. If a patient grows very seriously ill, then, above all other times, trust him. It will strengthen his hands. Do not defeat his efforts by discharging him and calling in a man uninformed in the case, who first must study it for a while before he can do as well for the sick one as can the man

who has watched the condition from the beginning. Have counsel, if you wish, but, let your regular attendant realize that it is not for lack of confidence in him. Thus, as the years go by, he will become more and more valuable to you, because he will come to know the constitution of each member of the family. Follow this advice, and the time will come when you will thank me for it. Good morning!"

If the more ignorant portion of the public were to learn that they can not pick up and drop doctors at a mere whim, they would acquire a new respect for the members of our profession. The little homily given above is one that I have used more than once—in substance, if not in exact words—and, while I did leave an indignant family at such a time, some of those same families, on reflection, have requested me afterward to become their family-physician. Still, even if this does not happen, nothing will be lost. These folk only are a source of worry and annoyance as long as they are unreformed.

This flippant manner of picking up and dropping a doctor as they would a kitchen-maid is due, in the case of some people, to an idea that it shows independence of judgment; in the case of a larger number, it is the result of a cold indifference and a lack of human sympathy. They are as cold-blooded as a fish. A doctor is to them no more than the merchant who sells them paints. They see no difference between relieving suffering and cleaning house. A doctor may pull them back from the brink of the grave, yet, the next time they need help, they will call anyone they can get a hold of; and they see no difference: a doctor is a doctor, and one is as good as any other. They have no sense of gratitude or personal regard and could not understand such a thing as a bond of sympathy between those that have passed through great perils together.

Selecting One's Doctor

In selecting a family physician, people often exhibit a sad lack of judgment. One would, naturally, suppose that intelligent persons would be slow to employ a boaster, a drug-addict or a drunkard; yet, there are plenty of people indiscriminate enough to accept a braggart's own estimate of himself and to consider him a great man, because he is always telling of his enormous business and of his wonderful cures. It is not an uncommon thing to hear ignorant people

say: "Yes, I know that Doctor So-and-So drinks, but, then, I think he knows more drunk than most doctors do sober." Even the drug-fiend, the slave of morphine or, worse, still, of cocaine, finds people that will trust their precious lives and the lives of their dear ones to his care.

Frankness

It would seem unnecessary to remind intelligent people of the need of being perfectly frank with their doctor. Yet, experience proves that such is not always the case. It is not an uncommon thing to find that a patient has concealed from his physician some important fact, some pet sin or indulgence. Sometimes this is discovered later, perhaps through some other member of the family, who privately supplies the doctor the suppressed information.

How, anyone can expect results from treatment when highly important facts have been suppressed, is difficult to understand. Perhaps one of the commonest instances of this sort is when a patient having venereal disease denies all knowledge of where or when he contracted it. The doctor may not care particularly to know *where* the contagion occurred, but, it is of some value to know *when*, and the fellow who "caught it in the water-closet" is, usually, hazy as to the date. However, he is not skilled in camouflaging, so, in faking his story, does not consider that a knowledge of the date may be of value to the physician whom he expects to cure him.

It is, as a rule, well to let a patient tell his own story in his own way, even though it must be supplemented by systematic questioning. There are patients, however, that are so prolix in their description, so afflicted with a perfect diarrhea of words that, when the doctor finds himself "gassed" by one of this kind, he must, in self-defense, resort to some method of stemming the torrent. It is told of old Doctor Abernethy that his favorite way of corking up these exhaustless fountains of loquacity was, to put a thermometer under their tongue and keep it there until he had completed his examination. As Doctor Abernethy died before the clinical thermometer was invented, the story is only another example of the tendency to attribute novel occurrences to any eccentric individual who is safely dead and can not enter a denial; for all that, it contains a valuable suggestion. If all the stories that have been attributed to Abraham Lincoln had really been told by

him, he assuredly could have found little time for doing anything else.

Obedience

Obedience is one of the things that a patient owes to his doctor, and one that it is not always easy to secure. Unless the case is in charge of a nurse, we are never sure that our instructions are being carried out. If we take note of how many doses of medicine we have provided for the patient, we often find at the next visit that, as the number of doses remaining prove, it has not been taken regularly; unless, indeed, he has been cunning enough to throw some of it away. There are patients who will report themselves as being no better or declare that the last medicine did them no good, when the truth is that they did not like it and, so, took that method of having it changed. One of the advantages of dispensing one's own drugs is, that it makes it easier to keep track of the patient's obedience. In leaving tablets or granules, one can leave just the proper number to last to the next visit, with a small margin for unforeseen delays. In writing prescriptions, this entails extra expense to the patient, since prescriptions for small amounts are relatively more expensive than if more is ordered. This, though, by no means is the only advantage in doing one's own dispensing.

Meddlers

One of the pests that make a doctor's life a burden is the meddler. He or she (and it most often is the latter) may be one of the family, a relative or merely a neighbor. There are women who seem to derive a vicious pleasure in undermining a family's confidence in their doctor. With a great show of interest and sympathy, they are always ready with that fiendish question, "Do you think that the doctor understands the case?"

I have lately had under care a case of tuberculosis that has made me very weary at times. Both the patient and his family are of that class of people who are very susceptible to suggestion, and for a while, at first, every time I saw him I found either that he was doing something that I had not ordered or he came asking permission to try something that a neighbor had suggested, or else his family was having the blues because some friend had said that

their doctor ought to have him do this or that, for, "don't you know that that is the very latest treatment?" It was only after several very emphatic heart-to-heart talks that I got him to understand that, if he wanted my services, he must turn a deaf ear to all such meddlers. As soon as he did this, he began to improve; which could not occur as long as his mind was continually being upset by outside criticisms and suggestions.

Some years ago, I had in care a case of typhoid fever in a girl of eighteen, the only daughter of an intelligent family and, of course, idolized by them. It was a severe case and in the third week the prognosis was exceedingly doubtful. The family had shown me entire confidence; but, in the crisis, the mother's anxiety became so great that, when a meddling neighbor persuaded her to try the latter's doctor, assuring her that he had cured a case "just like this", the mother's poise was upset and she informed me that they had decided to make a change. I asked her, why. She replied that her daughter was not getting any better and they thought it well to try another doctor. I asked her what reason she had for thinking that another could do more than I was doing, and she frankly stated that her neighbor had told her of a man of remarkable skill. Then I said to her: "You must do as you think best, but, before you really decide, take a few hours to reflect on these two questions: first, is your neighbor really capable of judging between the skill of two doctors? Has she a medical education?" And, second, 'Do you think it is good policy to trade horses while crossing a stream?' Think this over for a few hours, talk it over with your husband, then let me know what you decide."

That evening, they called me up, telling me to continue in charge of the case. Two days later, the patient was past the crisis and improving. Thereupon the mother said to me: "Now, if we had changed doctors, we should have given the new doctor all the credit and we should always have believed that your treatment was wrong." I replied: "You see how easy it is to do an injustice. But, then, we doctors are used to that." From that time on, I had no more faithful clients than this family.

[To be continued.]

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The Physiological Ego

By CHARLES J. LEWIS, M. D., Chicago, Illinois

EDITORIAL COMMENT:—The author of this interesting article suggests that a mapping out of the cortex similarly as he has shown it for the brain, will enable the physician to recognize his incipient insane patients and those merely "generally nervous."

PRIOR to the rise of medicine, only vague notions of Self, the Ego, and the Self-Consciousness were possible.

The first steps toward clarifying the situation were taken by the Greek physicists Empedocles and Democritus, who flourished at about between 460 and 300 B. C. They postulated that thought is composed of small and round atoms. These atoms entered through the senses and, passing to the soul, became thought. By substituting "brain" for "soul", this theory becomes an established fact.

The nervous system begins in the tips of afferent nerves, enters the cord and brain, and thence out to muscles. In like manner, the "atoms" of Democritus enter the senses, sense the objects that impressed, and at the same time form images of the objects which, upon reaching the soul, become ideas.

This unprecedented advance proposition Plato wellnigh suppressed beyond resuscitation, and he doubtless would have succeeded if Hippocrates had not demonstrated that diseases can be cured better by means of medicine than by sorcery. Still, this would not have made Hippocrates the "father of medicine" had he not been taught by Democritus the basic principles of his art. Dr. J. B. Tuke implies as much by saying that he had, in Democritus, a great master. Lang also has a good word for this acute philosopher when he says: "It is with few great men of antiquity historians have dealt so despitefully as they have with Democritus."

After saying that everything appertaining to thought, including the ego, the self, and self-consciousness, is sacred to medical men, and not to the psychologists, I will take up the central idea of this essay.

For centuries, the study of the genesis of thought has been classed under the form of psychology. This, in turn, was called the science of the mind. It is also said that knowledge is sourced (a) from the senses and (b) from the Supreme Intelli-

gence. Only the first of these positions is tenable. What is amazing is, that the "images" were said to be seized by the logician's Ego and immediately turned over to another, nonspacial entity called mind. To a physician, such an ego is as powerless to do anything as is the "mind" unable to raise itself up into sensuous experience.

"Cerebrology", Instead of Psychology

There lived in France in the first half of the seventeenth century two medical men who had much of the thinking-powers of Democritus. These were Cabanis and La Mettrie. The former held that the brain secreted thought as the liver secretes bile, while the latter declared that no one but a physician could efficiently talk about what is going on in the brain. Basing a remark on these statements, it is obvious that a physician's definition of the ego differs in a very pronounced manner from that of a philosopher.

Since the senses gather all of the material necessary for thought, it can readily be seen that they are of vast and primary importance, in that they alone gather all of the impressions used in producing ideas.

Is it necessary for a member of the medical profession to call aloud to his confrères to come at once to the rescue of the age-long slavery and domineering idea of the control of the brain by the mind? If we, as a body, had been alert, we should not be humiliated by being told that the specific nature of the so-called Ego, Self, and Self-consciousness had been a problem since the dawn of philosophy. Nor would its discussion at times have been hot and fierce. Among the disputants, David Hume was moved to say that, "Nothing in philosophy is yet established." And Baldwin, speaking on the same subject, remarked that the "self" or "ego," as set forth by some philosophers, defied analysis.

The point at issue, when clearly stated, is: That the specific nature of the so-called ego, the self, and the self-consciousness, has

been a problem since the dawn of philosophy. It is to its solution the medical profession should bend its efforts and make clear its physiological basis. The solution began and the day dawned when Democritus appeared on the intellectual horizon. That day, however, was of short duration, owing to the opposition of Plato, who not only dimmed its brilliancy, but, put the germ of cerebrology to sleep, in a crystal-like life, for more than two thousand years.

The Sense Impressions Unified in the Association-Center

Coming down to our time, the philosopher's ego and the crass consciousness of the psychologist and their deductions concerning brain-work can best be eliminated from our textbooks by teaching cerebrology instead of psychology.

Cerebrology is a discourse on the cortical centers, the sense organs, and the nerves that connect them with the centers. As all of our knowledge—knowledge of every description—is sourced chiefly through the sense of sight, of hearing, and of feeling, their description and that of their centers, will be based upon anatomical and physiological grounds.

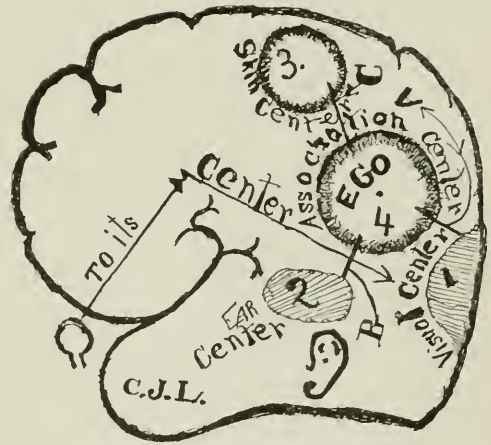
Without further ado, the senses of sight, hearing, and feeling are wholly separated from each other, and so are the nerves that connect them with the cortex. So, too, are the three centers apart from each other. In other words, they are like islands in mid-ocean—without nerve-bridge connection. These "islands" are variously called sensation-centers, perceptive centers, and localization-centers; by this author, however, and in this essay, they are called "ideating centers," under the assumption that it is in them that ideas of things are constructed. The term "perception" however, is objected to, on the ground that by most writers it is employed to imply that there is in man's head a "perceiver" other than his brain.

The layman as well as the physician is aware that the senses are separate, but, only a few of either class have stopped to consider that their centers also are separate. Being apart and working entirely by themselves, their products necessarily are apart.

To apply this thought in a concrete form, we'll make use of a cowbell. The eye sees the bell, the ear hears its sound, and

the hand feels it at the instant that it is ringing. Each sense-organ makes a specific image of the bell. These images, upon reaching their respective centers, are by them fabricated into three entirely different ideas of the bell. Being apart and having no hegemony (leadership) among them, they are utterly unable to unite their ideas for the formation of the Ego.

What now is the situation? It is this: if these centers were all there is of the cortex, each one of us would be three personalities, instead of one. Is this a mince-



SHOWING, SCHEMATICALLY, HOW THE EGO IS PRODUCED.

1, Visual center in the cortex. 2, The hearing-center. 3, The feeling-center. 4, The association-center. A, The path connecting the visual center with 4. B and C, paths connecting the hearing-and-feeling-centers with the association center (4) and home of the Ego. Line marked "to the center" connects the eye with the visual center in the cortex.

pie dream, a fancy, a foam, a mouthful of fiascos? What has been said above estops it from becoming any one of these. Still, to make of each one a "five", would, according to present teaching, be wholly illogical, be a predicament in psychology, and a travesty amounting to a monstrous misstatement of all that has been believed, in the past, about the ego being an entity. Nevertheless, it is incontestable. These three species of ideas, as several times mentioned, will always remain unknown to each other as long as they will stay in their respective centers, fully as much as if they were three persons speaking different tongues.

It will be interesting to recall three great men of antiquity who set in motion three

massive movements that tended to make the acquirement of knowledge easy—men that instituted three epochal periods in the unfoldment of practical, illusionary, and scientific thought. These superintellectual persons were Hippocrates, Plato, and Democritus. The first became the “father of medicine”. The second became the founder of idealism and the third became the “father” and founder of a system of brain-physiology (in a sense appropriate for this paper), but, by the writer called cerebrolgy.

Reverting to one unfinished point: It may be asked, “At what period did man first learn that he is a self, is other than the stone he stubbed his toe on?” The candid answer is, “We do not know”. At an off-hand guess, one may place that time to as far back as the age of barbarism.

If the “self” has such an ancient origin, it is remarkable that some of the learned of the past did not have the wisdom to give it a proper meaning. That they did not, is evident from their having clung to its abstract meaning through the Egyptian, Grecian, and Roman cultures, through the dark ages, the renaissance, and the reformation, and even, for the most part, down to the enlightenment of modern times. By regarding these traditioners as idealistic psychologists, it will not be far from the facts in their case to say that every one who went into the study of the brain with the intention of making it the abode of the supersensuous ego, of the nonextended mind and a unitary consciousness, was from the start doomed to disappointment.

War-Flour as an Illustration

The association-center is a cluster of nerve-cells in which the nerves from the senses mentioned terminate. It differs from these in that it is but *one*, as illustrated in the schematic drawing [p. 913.]

This *one* is a workshop. It gets its raw material in the raw condition we call ideas from the five ideating centers. These it churns-up in its protoplasmic cells until all of the different phases of a thing observed are consolidated into one product—a thought. The nearest concrete object the writer can seize upon is, “war-flour”. This is declared to be composed of (to be a compound of) the mill-products of wheat, oats, corn, rye, and barley. In so far as this concrete symbol holds, it typifies how a

single thought is produced from a compound having five ingredients. To follow the simile further, the compound loses its compound nature as made up of wheat, oats, corn, rye, and barley, and crammed into a one—“a war-flour”—in the association center. This delineation is mechanical, but, it typifies nerve-cell action, is, physiologically, probable, and, hence, convincing.

In contrast (Ward), “self is a psychological product of thought, not a datum of sense; hence, while Berkeley called it a notion and Kant called it an “idea” of the reason, Hume treated it as a philosophical fiction.” (“Encycl. Brit.”, vol. xx, 9th Ed., Footnote, p. 83.)

It has been said above that the association-center brings out a *single* meaning from the three phases of a cowbell. To the uninitiated, this needs elucidation. Speaking through the mouth of Roscellinus, the medieval nominalist, the meaning or conclusion reached would not contain a nominalistic visual idea of a bell, a nominalistic hearing-idea of a bell, nor, yet, a nominalistic touch- and temperature-idea of a bell. Instead, the three phases (ideas) of a bell would be merged into a one-bell-thought.

It is by these three nominalistic ideas being processed into One in the association-center that the physiological definition of the Ego, the Self, and the Self-Consciousness is postulated and verified.

The Author's Aim and Hope

To bring this epoch-making physiological principle into the limelight, to fasten it upon the attention of every student in the land, to rivet and clinch the meaning for all time, to embellish it with an easily grasped verification, and to standardize it with an unmistakable and comprehensive definition, has been the urge of him who, after seeing the learned in supersensuous studies searching here and searching there, and failing to see the light, he himself searched for a satisfactory answer to this hitherto most perplexing question, in the partially cultivated field of physiology.

It is a faraway hope that this definition will dislodge from all future writings every definition that will be in the least tainted with the abstractions of mysticism concerning the source and substance of the Ego, the Self, and Self-Consciousness.

An Explanation of Some Failures in the Use of Glandular Extracts

By HENRY R. HARROWER, M. D., Los Angeles, California

IN the past few years, the use of glandular extracts, or organotherapy, has leaped into considerable popularity and those of us who have been especially interested in endocrinology are frequently asked for information as to why a certain preparation did not bring about the anticipated therapeutic result.

As with every phase of the treatment of disease, we, naturally, expect to encounter a certain proportion of failures from the administration of organotherapeutic preparations, and, it could hardly be otherwise, for, we have not as yet found the "elixir of life" that so many have vainly looked for.

I have often heard statements something like this: "I tried that treatment faithfully for several weeks, and it seemed to do no more good than other things I had prescribed." Among these, corpus luteum, mammary extract, even thyroid gland have been mentioned. At times, organotherapy as a whole has thus been criticized, despite the limitations of the critic's clinical testing, and this experience may profitably be used as the text for a short "sermon," which may bring out some helpful suggestions for those that are expecting great things from organotherapy, while still somewhat inexperienced in its employment.

First of all, we must admit that, usually, organotherapy is tried in difficult cases of long standing, where other measures have been tried and have failed. Here, naturally, the results will be less satisfactory just as any treatment is likely to be less effective the further advanced and more complex is the disease. It is true that organotherapy deserves to be considered in just this class of cases, and it has been observed many times that, when other things have failed, organotherapy has enabled us to get wonderful results, and perhaps we have acquired an undue enthusiasm and expect too much of this method. None the less, we must not deprecate organotherapy because it can not accomplish the impossible.

There is another, very important factor that sometimes seems to be purposely ig-

nored, especially by those who do not want to be convinced. It has been learned that the real basis for the benefits to be expected from organotherapy is in the principle of homostimulation. "Extracts of an organ exert on the same organ an exciting influence, which lasts for a longer or shorter time. When the organ is insufficient, it is conceivable that this influence augments its action, and, when it is injured, that it favors its restoration." (Hallion.)

This means that we must have active preparations and responsive organisms. It is possible to have an inactive remedy, I will admit, though in these days these products far excel those of years ago. But, how about the reactivity of the patient and the response of those cell-aggregates it is desired to arouse or set into renewed motion? Especially in chronic disease where the conditions are the results of constant and long-continued irritation, malnutrition or toxemia, the reeducation of the worn-out endocrine glands is no small task. And, too, the degree to which these glands may be affected in one case, as compared with another, seemingly quite similar, varies very much, indeed. One individual responds to hormone stimuli rapidly and thoroughly, while another does not. One child "catches everything going," while another "has never been sick in its life." It is merely a matter of the physiological substratum—and this, indeed, is an intangible quantity.

So, we continue to use organotherapy, expecting a certain percentage of delayed results and even some entire failures, and are more than satisfied with the numerous excellent responses to the natural hormone stimuli that the administration of glandular extracts makes possible.

Another cause of failure is one's stopping before he should. In our "text" above, "several weeks" is the time stated as being the limit of the doctor's patience. Now, organotherapy is useful largely because it is a means of encouraging or educating certain organs to perform their service to the body; and, this is not a matter

of days or even weeks. When we give morphine, we expect practically immediate results. It works quickly, not by education, but, by paralyzing certain functions. Strychnine also works quickly, not by education, but, by abnormal stimulation. And how long does its effect last? As a matter of fact, the subtle influence of hormone-therapy is, indeed, a reeducation of certain organs, and this always takes time and, as we have seen before, depends a great deal upon the responsiveness of the cells. To be successful, organotherapy always should be continued for a generous time; and, further, it should be "tapered off" to see how well the endocrine glands can get along without the additional hormone stimuli.

Still another potent reason for failure is, the not unusual tendency to ignore the intimacy of the ductless glands and their most important interrelations. The subject of reinforcing a certain extract is too comprehensive to discuss here, but, is the beginning of the road to success with organotherapy, and I merely mention as one of the causes of failures a habit of overlooking associated derangement of other glands dependent upon, or at least associated with, the particular ductless gland that you may have discovered being at fault and which you are attempting to treat. In other words, combining gland extracts is likely to make for better results. And here, let me say it with emphasis, is the "open sesame" to the successful application of organotherapy in at least 90 percent of all cases in which this measure is indicated. It is not possible for a single endocrine organ to be affected, slightly or seriously, without reflex (hormonic) effects upon others of the allied organs.

The last, and quite the most important of all the causes of failure with organotherapy (and, for that matter, any other method of treatment) is an incomplete diagnosis. Too often we learn what appears to be the matter with our patient, but, not *all* that is wrong. I have repeatedly stated that the medical profession has more sins of omission than of commission. We overlook things. The minor form of hypothyroidism is very commonly ignored entirely. The consideration of the endocrine side of disease has been passed by until very re-

cently. Disorders of the ductless glands had to be "real diseases" before we recognized them, and hidden functional aberrations were never sought for. Now all is being changed and, as our eyes are being opened to the importance of functional pathology, not only are we recognizing the early influences of endocrine dysfunction, but we are learning to consider our patient as a whole rather than as an individual with some obvious disease.

Here, then, lies the greatest source of failure in medicine—we have been treating diseases rather than patients! As long as we consider a case of, say, hypothyroidism as being suited for organotherapy and ignore the demineralization, the acidosis or hypoalkalinity or the original active cause of the disturbance—some hidden focal infection, a dilated and overloaded colon, a dietetic habit that has overburdened the detoxicating department of the body or other common underlying causes of disease—we are not going to get the optimal results from our organotherapy.

The reverse is equally true: even if we are most thorough in our diagnosis, and our clinical and laboratory findings are about perfect, we can reduce the efficiency of our treatment quite considerably by omitting to consider the effect that the various derangements may have had upon the endocrine functions; but, if, with this information in mind, we make a concerted effort to encourage these overworked glands and favor the reestablishment of their normal functional service to the body in conjunction with the other things we need to do, we shall most certainly accomplish more.

There are other causes of failure with organotherapy that will occur to the thinking physician and which need not be mentioned here. If you are convinced that a certain procedure is destined to fail, likely as not it will! If the patient is sure your measures are not going to help, the psychic condition will surely overbalance a large part of the possible benefit. So with organotherapy.

We must realize that organotherapy is but a factor in our work and that we can not and must not expect the administration of a few tablets or capsules to reeducate, rejuvenate, and remake our patients.



What Others are Doing

DIAGNOSTIC STANDARDS OF TUBERCULOUS CERVICAL ADENITIS

The present standards are included in that portion of the work relating to the standards of diagnosis and treatment of cervical adenitis that is to be found in the third edition of the pamphlet on Diagnostic Standards recently issued by the Framingham Community Health and Tuberculosis Demonstration. These standards will undoubtedly repay careful reading by every physician. In a foreword to the third edition, the pamphlet states that it is recognized that diagnostic standards can never be completely satisfactory for, almost inevitably, they are either antagonistically dogmatic or qualified to the point of futility. Consequently, these standards are presented with some trepidation and aim merely to assist the physicians to an appreciation of such as substandard strength, size and enobscure tuberculous lesions.

Under the heading Diagnosis, the standards are grouped with reference to the following considerations:

1. Enlargement of the cervical glands.
2. Exposure.
3. Other causes of enlarged cervical glands.
4. Constitutional signs and symptoms when the cervical glands are enlarged.
5. Duration of enlarged glands.
6. The relation of diseased tonsils and carious teeth to enlarged cervical glands.
7. Pathological examination.
8. Confirmatory evidence.

Striking points put forward are: That any well-marked enlargement of the cervical glands that persists for several months after throat and mouth infections have been relieved should be considered tuberculous. That a history of exposure giving enlarged cervical glands should have its due weight in diagnosis. That enlarged glands being present, constitutional signs and symptoms such as substandard strength, size, and endurance of a patient, and anemia, malnutrition, fever, and others, should suggest

the possibility of a diagnosis of tuberculosis. That, in general, tuberculosis should not be considered unless the enlargement persists for several months following elimination of other possible causes, such as diseased tonsils, carious teeth. That a number of acute and chronic non-tuberculous conditions can arouse more or less permanent enlargement of the glands. That, in case of any doubt as to diagnosis, it is well to remove a gland and submit it to pathological examination. Tonsils and adenoids that have been removed should be examined for tuberculosis histologically and by animal inoculation. If these are found to be tuberculous, it is wise to conclude that they are likewise tuberculous. Confirmatory evidence may be had by tuberculin skin tests and by the x-ray, and from manifest tuberculous conditions in other parts of the body.

The article concludes by laying down several well-recognized general principles in the treatment of tuberculous cervical adenitis. (*Amer. Rev. of Tub.* 1918, II, No. 9.)

HOW VARIOUS REMEDIES INFLUENCE SUPERFICIAL HEMORRHAGE

The result of a very interesting series of experiments conducted by Paul J. Hanzlik, of the Pharmacological Laboratory of Western Reserve University, relative to the effect of various medicinal agents, when applied locally, upon superficial hemorrhage, has been reported in *The Journal of Pharmacology and Experimental Therapeutics* for September. To the same number of this journal, Doctor Hanzlik has contributed another article, relative to the effects of systemic agents on hemorrhage, that is, remedies that are administered either intravenously or subcutaneously.

In making these tests, Doctor Hanzlik tried out, not only the ordinary local hemostatics, but, also a considerable variety of other agents, including various local anes-

thetics, antiseptics, narcotics, sera, and the like. His report seemed to show that a number of the much-vaunted styptic agents, including both proprietary and popular remedies were, as a matter of fact, of little or no value.

The tests—animals were dogs, the method consisting in continuous irrigation, with the selected remedy, of the denervated and incised footpad of the animal, collecting the washfluid at definite periods and estimating the constituents of the blood in this fluid. In addition to recording the amount of the hemorrhage, Doctor Hanzlik also kept records of the changes in the blood pressure. The basic liquid employed on controls and as a solvent for the remedy to be tested was a 1-percent citrate solution. Sixty-two different agents were tested, and as a rule three applications were made, in a few instances only one experiment being recorded. In the accompanying table the results are shown:

Diminished	Increased	Unchanged or variable
Acetic acid	Alum	Aconite
Atropine	Antipyrin	Camphor
Barium chloride	Apothesine	Coagulen (Ciba)
Caffeine	Beef-serum	Gelatin
Calcium chloride	Berberine	Histamin
Cane-sugar	Chelidonine	Kephalin
Cocaine	Chloral hydrate	Lactose
Digitalis	Chlorazene	Menthol
Epinephrin (1:1,000,000 and higher)	Dichloramine-T	Permanganate
Ferric chloride	Emetine	Sparteine
Glycerin of tannic acid	Epinephrin (1:10,000,000 to 50,000,000)	Thromboplastin (Squibb)
Hydrochloric acid	Ergot, fluid extract	Veratrum
Morphine	Horse-serum	
Physiologic salt solution	Hydrastis, fluid extract	
Peptone, 10-per cent	Hypochlorite solution (Dakin's)	
Pituitary extract	Hydrastinine hydrochloride	
Quinine	Narcotine	
Quinine-urea hydrochloride	Nitrite	
Silver nitrate	Novocaine	
Sodium bicarbonate	Orthoform	
Sodium chloride, 10-per cent	Papaverine	
Strophanthus	Peptone, 5 per cent	
Tannin	Salicylate	
Oil of Turpentine	Stovain	
Tyramin	Stypticin	
Zinc sulphate	Styptol	

The most powerful styptic agent was epinephrin (adrenalin). Assigning a value of 1 to epinephrin, the average values for several most important drugs were as follows: Epinephrin 1, pituitary extract, 1-4; tyramin, 1-14; acetic acid, 1-250; ferric chloride, 1-600; quinine and urea hydrochloride, 1-625; tannin, 1-5000; sodium bicarbonate, 1-25,000; barium chloride,

1-50,000; cane-sugar, 1-84,000; sodium chloride, 1-500,000.

Of the various agents employed as styptics, Hanzlik says that epinephrin, pituitary extract, tyramin, and dilute acetic acid are least objectionable. Barium chloride in 10-percent solution is quite effective, but, probably is toxic. The objections to the use of ferric chloride are well known.

It is interesting to observe that many remedies that have been accepted as of considerable value are shown to be of little service; for instance, such remedies as stypticin, styptol, antipyrin, and alum.

It also is interesting to observe that irrigations of wounds with alcohol-free tinctures of digitalis and strophanthus diminished bleeding, while at the same time they raised blood pressure. The same is true of sparteine and caffeine, but, because of their local irritating action, these remedies hardly are desirable. Cocaine causes a distinct diminution of hemorrhage, the maxi-

mum effect appearing in three and one-half minutes and lasting about ten minutes. Novocaine (procaine), stovaine, apothesine, and orthoform increased the hemorrhage slightly. Quinine and urea hydrochloride reduced it.

It is interesting to observe that thromboplastic agents, such as kephalin, coagulen and various brain-extracts sold under the

name of "thromboplastin" had little or no effect. The same is true of the various beef-sera.

All of the antiseptics mentioned, and including chlorazene, dichloramine-T, and Dakin's hypochlorite solution, increased the flow of blood, this result being in accordance with the statements made regarding them. The most marked increase in hemorrhage from these solutions came from the hypochlorite solution. From chlorazene, the results were somewhat variable. The increase in hemorrhage lasted about a maximum of 22 minutes with chlorazene, six to fifteen minutes with dichloramine-T, and from twelve to fifteen minutes with the hypochlorite-solution.

Turning now to the systemic effects of various agents introduced into the circulation either intravenously or subcutaneously, Hanzlik found that the most effective hemostatic agents were epinephrin, tyramin, and pituitary extract. The effect of the following remedies upon bleeding are roughly parallel to the changes in the blood pressure, namely, hemorrhage fell as blood pressure fell: coagulen (Ciba), kephalin, thromboplastin, horse-serum, stypticin, gelatin, saline solution, emetine, and possibly peptone. The subjoined table gives an idea of the results obtained. It should be explained that the bleeding was diminished by digitalis and ergot only when fatal doses were given.

Bleeding diminished	Bleeding increased	Bleeding variable or unchanged
Cotarnine hydrochloride	Asphyxia	Beef-serum
(stypticin)	Gelatin	Coagulen (Ciba)
Digitalis	Kephalin (Howell)	Emetine (subcutaneously)
Epinephrin	Nitrite	Horse-serum
Ergot	Physiologic salt-solution	Pituitary extract
Hvdrastis		Thromboplastin
Thromboplastin		(intramuscularly)
Tyramin		

HOW TO TREAT A COLD SIMPLY AND EFFECTIVELY

In a recent number of *The Medical Record*, Dr. Beverly Robinson offers a method of treating cold which seems to be very effective. It is as follows:

As soon as the first premonitory symptoms of a cold manifest themselves, such as sneezing, chilliness, cough, give from 5 to 10 grains of salicylate of ammonia and one-half a grain of caffeine every two hours, for four to six doses, as an adult

dose, in capsules or konseals. To a child, give appropriate dose in solution, with a little syrup of tolu and peppermint water. In many instances, the cold will be aborted or abridged in length and severity. The cold may signify little but passing discomfort, or it may mean the beginning of grip, bronchitis, or pneumonia. In any event, the salicylate and caffeine are very useful, and sometimes ward off or greatly ameliorate impending trouble.

If there is fever in the beginning, or within a few hours, add 1-2 to 1 grain of phenacetin to every dose of salicylate, for an adult. At bedtime, stop the salicylate and caffeine and take 1-2 teaspoonful of aromatic spirit of ammonia and 1-2 teaspoonful of sweet spirit of niter in 2 tablespoonfuls of water. If the nose is stopped up, or running, with or without sneezing, use a little 1-percent carbolyzed vaseline or a menthol salve.

The comfort and well-being of a patient, when distressed with nasal obstruction, frequent cough, fever, and general malaise, is much promoted by a hot mustard-footbath, later drying the feet thoroughly and putting on a long pair of woolen stockings, such as golf players wear, and then to bed, with much covering, at first, to promote perspiration. Of course, if there is constipation, a laxative pill after breakfast or a seidlitz powder, before, is indicated and desirable.

Whenever the cough persists, with expectoration, stop the use of the salicylate and caffeine and give syrup of hypophosphite of ammonium, a teaspoonful every two hours, just as it is, and wear the perforated zinc inhaler, making use with it of equal parts of beechwood creosote, spirit of chloroform, and alcohol. At first, the inhaler should be worn a few minutes at a time. Later, it may be worn an hour or more at one time, and repeated several times in twenty-four hours.

Painting the chest with compound tincture of iodine, or rubbing it with equal

parts of spirit of turpentine and compound soap-liniment, is useful, and either one may be employed, according to the convenience or choice of the patient. If there is notably localized pain in the chest, the use of the electric pad often is most comforting especially at bedtime.

If there is marked fever, with cough, and pain in the chest, bed should be insisted upon, and warm inhalations of creosote vapors from a croup kettle should be begun and kept up more or less continuously until the symptoms have greatly improved. If the creosote odor is objectionable, it may be modified by the addition of compound tincture of benzoin, or one of the oils of pine, like *oleum pini sylvestris*, or *oleum pini pumilio*.

Personally, we probably would wish to make a few changes in the remedies employed; however, none of the changes would be essential. The important fact is, that a positive and energetic treatment of "cold" is outlined so clearly by a prominent clinician who evidently is a therapeutic optimist. The medical world is slowly but surely giving up its therapeutic nihilism—to the advantage of the sick, we are certain.

TELEPHONE DEAFNESS

In a recent communication to *The Buffalo Medical Journal*, Doctor Cott called attention to several cases in which persons when they put the telephone receiver to the ear suddenly heard a loud, high pitched sound and then could hear nothing more, the deafness persisting for a considerable length of time.

His explanation of the cause of this deafness is, that any interference to the line while one is listening may jar the auditory nerve suddenly and induce a high pitched sound, followed by prolonged tinnitus with immediate deafness, either partial or total, the symptoms ameliorating after some weeks.

This accident can be avoided, because it occurs only when the listener holds the receiver in such contact with the ear that no external sound can enter, a common way to hold the receiver when there is much noise around. If the user of the telephone applies the receiver in such a way that a space is left for free circulation of air between it and the ears, shock can not be transmitted to the nerve, no

matter how much disturbance there may be on the line.

IPECACUANHA IN THE TREATMENT OF AURICULAR DISEASES

In the treatment of cardiac affections, ipecacuanha has been used as an adjunct by many physicians, the purpose being, to push the drug to emetic effect in order to terminate attacks of palpitation. The belief has been entertained that the effect upon the auricular functional disorders was purely reflex.

In disorders of the auricle, which the author believes to be, very often, of toxic origin, Dr. Louis Faugeres Bishop (*Méd. Rec.* Aug 31.) declares that ipecacuanha seems to be a valuable adjunct to digitalis. In seriously ill people who are suffering from fibrillation of the auricle, there may be not much time to spare and a remedy must be pushed to a degree that is certainly bold. In desperate circumstances, Doctor Bishop often has felt obliged to administer digitalis to the point of producing vomiting. In one case, however, where he feared to await this effect, because of the urgency of the case, he combined ipecacuanha with the digitalis preparation, and found that the condition responded more than usually well to the treatment; so, he was led to repeat the combination on other occasions.

In consequence of these experiences, Doctor Bishop combines ipecacuanha with digitalis in these conditions, which he believes to be due to toxic influences acting upon the auricles; prescribing a tablet containing 1-2 grain of powdered digitalis and 1-8 grain of ipecacuanha. While the nauseating effect has not been hastened by this combination, the author believes that the action of the digitalis has been improved.

We are impressed with the possibilities of this combination suggested by Doctor Bishop; but, suggest that emetine hydrochloride probably would produce a typical ipecac action more promptly than does the crude drug; especially since it may be administered hypodermically, whereby the effect would be hastened. At any rate, in cardiac crises of the kind referred to here, the attempt to secure prompt relief, by administering digitalis, or, perhaps, digitogenin, in combination with emetine hydrochloride may well be made. We should be glad to learn of observations made under such treatment.

Miscellaneous Articles

Studies on Food Economics

Peas and Beans

THE seeds of leguminous plants in general contain a large percentage of a substance, very closely allied to wheat-gluten and to casein, to which the name legumin has been given.

A chemically obtained legumin in solution in water is coagulated when heated to nearly the boiling-point of water, in which respect it resembles albumin (egg-white); it also is coagulated by rennet, and in its relation to acids and alkalis it resembles casein, the curd of milk, compared with which it is equally nutritious as a tissue-builder. Seeing that the world is gradually approaching a grain- and meat-famine, it is absolutely necessary to find suitable substitute tissue-builders, among which we have dried peas and beans. However, the latter have not been used thus, so far, for the reason that there is a lack of understanding of their nature and qualities as food, also a want of a proper knowledge of how to prepare such food in the most palatable form.

Since we, as a nation, have entered into this world-war, the price of peas and beans has increased above the past normal, our government fully recognizing their food value for our army and navy and buying up large amounts of these legumes. However, if the mass of our population had a better knowledge of how to prepare peas and beans by a proper mode of cooking them, a greater wheat conservation might be affected. We will, therefore, devote the greater portion of this article to the consideration of the cooking of peas and beans.

Practically regarded and treated, casein and legumin may be considered as being the same; the one being obtained from the vegetable-kingdom—which is not as likely to fail as the other one from the animal-kingdom.

The legumin from vegetables, as ordinarily prepared by cooking, is the most

difficult of digestion of its albuminoid contents; while the casein from the animal enjoys the same distinction. They much resemble each other in flavors, and John Chinaman makes actual cheese from peas and beans.

There is an old couplet—so old that the date of its birth can not be deduced from the mist of past ages—which runs as follows:

Peas-pudding hot, peas-pudding cold,

Peas-pudding in the pot, nine days old.

As this couplet expresses a culinary and chemical principle of considerable importance we use it as an introduction to what follows.

In a previous article, we stated that the *proper* cooking-temperature is 180° F., and, therefore, not as high as that of boiling water, or 212° F. The high temperature coagulates the albumin and fibrous tissue, while, if prolonged, the lower temperature slowly renders them soluble, and thus more digestible. Dried peas and beans should be soaked in water to which has been added a small quantity of potash—preferably the carbonate.

Caustic wood-ash will cause these legumes to part with their skin more readily than will the neutral bicarbonate of potassium. The peas and beans now will part with their outer coating, or skin, which is perfectly indigestible, while it readily ferments, and thus gives rise to gases.

Now, then, if after thus soaking these peas, or beans, we cook them for many hours at a low temperature, say 180° F. (a fireless cooker or a double boiler will best serve the purpose), we shall obtain the best results.

I pause here to quote from Prof. William's "Chemistry of Cooking", as follows: "My father and his brothers were martyrs to rheumatic gout and died early in consequence. I had a premonitory at-

tack of gout at the age of twenty-five and other warning symptoms at other times, but, have kept the enemy at bay during forty years by simply understanding that this lithic acid (stony acid) combines with potash, forming thus a soluble salt, which is safely excreted."

We, ourselves, have failed of many a fee, owing to our colored sisters feeding their children, when ailing, on the pot-liquor of vegetables, which their white sisters either throw away or give as feed to the pigs. As a matter of fact, this pot-liquor contains much of mineral (especially potassium) salts dissolved out, and, in our practice, we have found that the potassium salts, as found in our fruits and vegetables, are better medicinally than in their uncombined chemical state outside such tissues.

It is quite possible to take in an excess of chemical potassium, since its depressing, "lowering" action results in what may be called alkaliosis. There is no such danger from vegetable feedings. The principal vegetable potassium salts are the citrate, the tartrate, and the malate, besides a few other, less important, organic salts. The lactic-acid salt is found in milk, and it favors digestion. Peas and beans, when cooked, should be stored in a closed Mason jar for several days before being used as food. The change effected is the same as that in ensilage, namely, a softening of fibers and a sweetening, the latter owing to the formation of sugar. The same applies to cooked oatmeal. As an example and result of this treatment of food, we have the well-known sauerkraut. It is also seen in the ripening of our Le Conte pears. We remove ours from our tree while they are hard, acid, and juiceless. By being kept in the dark some time, they become soft, juicy, sweet, and of delicious flavor,

As a substitute for wheat and meat, the legumens are more than equal to them in healthful and nutritive value.

By the reading of the Holy Book, we find that Daniel surpassed those set apart for special feeding in order to be fit servants of the King, and who, even though being fed on what was considered the choicest of foods, did not equal Daniel in looks or robustness of health, for, he was fed simply on leguminous food and, possibly, fruit—the food of our first parents. The last pound of grain, it is said, will win this war; hence, let us see to it that we

conserve it as much as possible by the substitution of the legumens as food.

The whole world is looking to us for grain, while we are more than wasting it in the production of alcoholic beverages.

Ethyl-alcohol can be made from any of the starches or pithy material, even from wood waste. That made from wood waste is produced as follows: The wood first is reduced to a pulp. Next, this is treated with sulphuric acid and thus reduced to a kind of sugar. The sugar then is fermented, when carbon dioxide and alcohol are formed.

Dehydration

For the material for the following article, we are largely indebted to Prof. John R. Murlin, of the food division of the Surgeon-General's office, Washington, D. C.

The object of this division in these studies, was, to apply the science of nutrition to the problems of feeding our army. These problems, in their application to civil life, are of still greater importance. For, from civil life, we obtain the raw material of which our army is composed, and on which the greatest efficiency of our industrial system is based.

To begin with, we find in our army-feeding experience that meat represents the most expensive article of diet. However, for the rapid repair of muscle, meat is the most economic of all the nutritive food-substances we have.

Muscular work does not wear and break down the muscular system. This is a demonstrated fact. On the contrary, it is an upbuilder. This is well known to trainers of athletes. A man who has not been accustomed to physical work, when he begins actual muscular exercise, instead of breaking down muscle, will build up muscle.

It is also demonstrated that the breakdown of nitrogenous material in the body does not increase in muscular work, over the amount broken down in complete muscular rest. Muscular work is done at the expense of potential energy in the form of carbohydrate (sugar) and the hydrocarbons (fats). Of these, sugar takes precedence, as being the most economical. Our average soldier craves sweets without knowing its peculiar use as a quick energizer by its oxydation.

For an examination of one camp, it was found that the soldier, in camp, bought, each day, in the neighborhood of 500 ca-

lories of energy in the form of sweets. However, for quick delivery of superenergy, such as getting "over the top," a high-protein diet was found necessary. In view of what is here said, would it not be as well—except on extra occasions, such as "getting over the top"—to reduce the soldier's ordinary meat diet and increase his carbohydrate (sugar) allowance?

All that is written above should instruct our brethren as to the nutrition of the mass of our population. Meat being the dearest of all our foods at the present time and the amount of our future supply being very precarious, would it not be as well to reduce the average amount used by individuals in civil life? Now, we find meat is about 70 percent water, while milk is 88 percent, and eggs about the same. With our improved technic, why can not we dehydrate these most important foods, likewise most of our vegetables and fruits? Meat spoilage is almost entirely due to imperfect refrigeration. Experiments have been made at the Harriman Research Laboratory, at New York, in dehydration at a low temperature and a high vacuum. Such dehydrated food-material would be far less costly to transport and thus result in reduced cost of living, requiring less wage for labor and, consequently, a great reduction in the price of commodities. Milk, by a process of dehydration, could be sold, per quart of liquid-equivalent, for 9 cents. Lean meat now selling at retail at 40 cents per pound, its equivalent could be sold in powder form for as low as 20 cents.

The British army allows 1 pound of meat each day, the French army allows 3-4 pound, and the Italian army allows only 1-2 pound, while our American army is provided with 1 and 1-4 pounds, although the actual consumption in camp at the present time does not exceed 3-4 pound.

Just here we will remind our readers of what is well known, namely: muscular work does not result from a destruction of the protein elements of our food, the oxidation of the carbonaceous compounds, sugars and oils, furnishing the force that is transformed by the muscular system into motor power. When employed exclusively as food for any length of time, the albuminous substances are incapable of supporting life.

Alcohol, when introduced into the system in small quantities, undergoes oxidation and contributes to the production of

force, and is, thus far, only a food. In small quantities, it excites the heart and causes increased secretion of the gastric glands, hence, improves digestion and stimulates the activities of the nervous centers. When taken as a beverage, its use retards the metamorphosis of the tissues; the elimination of urea and carbonic acid is lessened, the temperature is lowered, the muscular power is impaired, and the resistance to depressing external influence is diminished. When taken throughout a long period of time, alcohol impairs digestion, produces gastric catarrh, and disorders the secreting powers of the hepatic cells. It also diminishes the muscular power, besides destroying the structure and composition of the cells of the brain and spinal cord. The connective tissue of the body increases in amount and, subsequently contracting, gives rise to sclerosis.

From numerous investigations concerning the percentage composition of different foodstuffs, and according to which their water content ranges from 91 in turnips to 75 in potatoes and 74 in eggs, it may plainly be perceived how much we might save in weight if the water could be eliminated from these foods by dehydration. The transportation of food-products would be much relieved of its present burdens. [Certain tables which the author cites are not reproduced in this place, for the reason that they may be found in most textbooks on dietetic.—Ed.]

Major Samuel C. Prescott, of the food division, has prepared an exhaustive report on the subject of dehydration covering all phases of the subject, from the saving in the space to the chemical composition and microbiology of the product. Immediately after this report was submitted to the quartermaster's department, that section of the army began placing orders for dehydrated vegetables, such as potatoes, onions, and carrots, for the use of General Pershing's army.

As yet, the tonnage contracted for is not large, but, in all probability in the near future dehydrated vegetables will become a staple article in our army rations, as they have already become in the ration of the British army. Thousands of tons of dehydrated vegetables are being prepared in Canada, some also in the United States, for the British army.

By simply soaking in water and boiling in the same water—thus saving the mineral

elements so essential to health—these vegetables are brought back to the condition of fresh vegetables so perfectly that very often they can not be distinguished from the fresh vegetables themselves.

It is fairly safe to predict that before long methods will be found for the dehydration of meat as have already been found for that of milk. Spoiling of meat is almost entirely due to imperfect refrigeration, but, if the water is eliminated, meat can not spoil. Furthermore, bacteria are semiaquatic and can not live and thrive in the absence of moisture. The American Indians, in former times, dried their meat in the sun over dense smoke, and thus prepared it kept good for a long time. Dried meat will, in the future, largely take the place of our beef extracts for making nourishing soups for invalids. Vast quantities of vegetables are spoiling in the fields of Florida, when they might be conserved by the process of dehydration and thus benefit the rest of the country.

A. T. CUZNER.

Gilmore, Fla.

THANKSGIVING CONTRIBUTIONS TO MEDICAL OFFICERS IN CAMP

We are greatly pleased to acknowledge receipt of package containing tobacco and gum which you recently sent us. We wish to express our appreciation of your kind thought in sending these things, which will be distributed among the boys at Thanksgiving dinner.

IRA E. GATES,

Captain Sanitary Corps, Hospital Adjutant.
Fort Oglethorpe, Ga.

The package containing the cigars, cigarettes and tobacco, of which you spoke in your favor of November 13, came to hand this morning. I desire to express to you my appreciation of your thoughtfulness for the physicians in this camp, and can assure you that they, as well as I, will appreciate this offering, especially as it comes from contributions from such a scattered clientele as the readers of your journals.

W. N. BISPHAM,

Colonel, M. C., U. S. A., Commandant.
Fort Oglethorpe, Ga.

[These letters were received in response to an express package that we had sent to Fort Oglethorpe for the benefit of the medi-

cal officers in the training camp there. The package contained tobacco, chewing gum, cigarettes and cigars, and we hoped in this manner to contribute to the Thanksgiving cheer of our colleagues at present in training.—Ed.]

FIGHTING INFLUENZA

Early in the course of the epidemic of influenza in Chicago, two of our most important executives were attacked by the disease. Dr. J. F. Biehn, director of our biologic department, contracted it at Great Lakes Naval Training Station Hospital, where he went to familiarize himself with the disease and secure cultures of the organisms. Doctor Biehn came down with the disease late in September. He and his two children were very sick, but, all recovered. Mr. F. M. Young, director of our chemical manufacturing department, contracted the disease about the same time as Doctor Biehn. He was very ill, but recovered. His wife also contracted the disease, and died after a few days' illness of complicating pneumonia.

Within a few days, three other cases appeared among our employes. They received careful medical attention at the hands of Dr. H. J. Achard, of our staff, and all recovered without complications.

At this time, prophylactic measures were instituted, consisting mainly in the use of sprays of dichloramine-T-chlorococaine solution, and the home use of chlorazene. Every employe was invited to visit the plant dispensary at least twice daily, where they were carefully sprayed with the dichloramine-T-chlorococaine solution. As a consequence, we believe, of this treatment, only one further case had developed among the employes of our plant, at this writing, in the course of two or three weeks. This employe, a young lady, had received the sprays, which did not apparently prevent the disease in her case, but, it ran a very mild course.

In the laboratory at Ravenswood, between 200 and 300 persons are employed. During the period referred to, there have been thousands of cases of the disease in this vicinity, and a very large number of deaths. In a number of instances the disease was (and still is) present in the homes of persons working in our plant.

To supplement the preceding, we are now giving prophylactic vaccination with the

Influenza Pneumonia Combined bacterin (Rosenow). Only about half of the help thus far has received these injections, and it is our purpose to give the three shots at five to seven day intervals, as recommended by Doctor Rosenow.

Every effort is being made by our medical staff to keep the employes in good health. Minor ailments are looked after carefully, and if any worker is not well, he or she is sent home. In a number of instances, calcium sulphide has been given to saturation, and this is generally recommended, especially for small children. Iodized calcium has been used very freely throughout the epidemic, and apparently with the best results.

While it is not safe to crow until we are entirely out of the woods, we are well satisfied with the results thus far obtained. Nearby manufacturing establishments are thoroughly "shot to pieces", but, we have been able to keep our working force virtually intact, and we hope to continue so.

THE ABBOTT LABORATORIES.

Chicago, Ill.

[We are informed that, since the foregoing report was written, the immunization of the employes of the Abbott Laboratories has been completed, as far as it was submitted to. Since the recent reports foreshadowing a new epidemic of influenza, renewed efforts are to be made to protect the working force of this institution fully against the consequences of infection.—Ed.]

PNEUMONIA AGAIN

After reading the article in your May issue, (p. 373), entitled "Can treatment influence the death rate of lobar pneumonia", where reference is made to the assertion emanating from the Massachusetts General Hospital, that we have not discovered anything during the past 95 years that will help, I just got "fussy all over", and now I am going to say something.

I have been practicing medicine for the past seven or eight years, and during that time I have treated many cases of lobar pneumonia. During the past winter, when we had a regular deluge of it, I had some 20 cases, and these patients now are well and stand living monuments to the efficacy of drugs when properly used.

Doctor Waugh was teaching when I attended college, and, after hearing him lec-

ture and knowing him as I did, I felt some sense of security when I entered the practice of medicine—and I have invariably found that, when I did not get results from my drugs, the fault lay in me, and not in the remedies prescribed.

When I see a doctor that says, "There is nothing to medicine", I know he is a failure; for, he condemns medicine because he knows nothing about it.

When I was in the army service, I learned that the treatment given the pneumonia-patients followed the "old-line" expectant plan, and, so far as I could discover most of them died. Of course, in the army, the doctor uses what drugs are mentioned in the military medical manual, and not what he might have used in private practice. After leaving the army, I located here, where my predecessor had been for seventeen years and had the people believing that pneumonia is incurable. As a matter of fact, he lost every case he had attended—had lost 7 the winter before I came. So, when I was called to my first case of pneumonia and informed the parents of my diagnosis, they were ready for a funeral and did not believe me when I told them that, with good nursing and treatment, their sick child would recover. At present, I sometimes am called a distance of 20 miles to take charge of a pneumonia-victim.

To illustrate, my first case was one of the worst that I ever have had to contend with and I did not see the patient until the family doctor gave him up and told them the boy was going to die. However, the doctor suggested that they try me, because his own wife was sick and he could not make as many calls as he would like to.

I saw the boy at 5 in the morning on February 23, last, and his condition was as follows: Respiration 58, short and jerky; pulse somewhere between 180 and 200, so fast I could not get it; temperature 104.5 degrees F.; complete consolidation of right lung, with an extensive involvement of the lower lobe of the left. The boy was 11 years old. His history was negative up to this present attack. He was in active delirium, murmuring and asking for help. His coughing was almost constant, with much pain and discomfort. He was emaciated and somewhat cyanotic. He had

been under the other doctor's care for eleven days. After a careful examination, I told the parents that I did not believe the boy could get well, but, that, as long as there was life, we must fight.

Before describing my treatment I want to state that the boy had up to then been given a mixture consisting of atropine sulphate, morphine sulphate, strychnine sulphate, alcohol, and water, given in tablespoonful doses every three hours, and that was all the treatment he was getting.

I immediately applied a dressing of libradol to his chest, about the thickness of a knife-blade, anteriorly and posteriorly, with gauze and thick layers of cotton. Hypodermically, I gave 4 mils (Cc.) of pneumonia-phylacogen. Internally, I gave echinacea (Lloyd's), 1 dram every three hours, and then a mixture, every two hours, consisting of asclepias, 4 drams; bryonia, 1 dram; aconite, 30 minims; water, enough to make 4 ounces. Also, calomel and castor-oil, to clean out; then high enemata, to get what was left. I also put him on physiological salt solution by means of proctoclysis (Murphy's method). Then I called a nurse. I gave pneumonia-phylacogen every six hours, kept up the proctoclysis of salt solution, also resorted to feeding per rectum every six hours.

At about 9 o'clock, same morning, we had a nice reaction from the serum and other medicine; the temperature began to recede and by night it was down to 102.5 degrees, the respirations were about 40, to the minute, and the pulse was down to around 140. The cough was less and without pain, the boy resting and sleeping. I changed the libradol every twelve hours for three days and then applied and continued pneumophthisine. I kept up the echinacea and serum throughout the treatment, also the fever-mixture previously mentioned. By this combined treatment of medicine, serum, proctoclysis, and feeding, we were able to keep the boy holding his own, with a temperature fluctuating between 103 and 100 degrees—which indicated condition of the lung.

In three days after beginning treatment, the left lung was entirely clear, so that he had one good side for taking in oxygen; still, his right lung was as solid as a rock. No sign of resolution in the right side appeared for about sixteen days, when I

could detect the presence of fluid. Consequently, I resected a rib, under chloroform anesthesia, (I never use ether in pneumonia) and obtained about 5 pints of pus, blood, and fluid. To combat the mixed infection, phylacogen, also echinacea and physiological salt solution and rectal feeding were resorted to.

By March 23, the boy was well enough for me to dismiss the case, whereupon I left for 6-weeks' postgraduate-work in Chicago. Upon my return, I called at the family's home and the boy met me at the gate, somewhat emaciated, to be sure, but, with color in his cheeks. His side had almost quit draining and I removed the tube. At this writing, June 25, he is entirely well, the side wound has closed nicely, he weighs more than ever, and spends his time hunting and fishing.

Some skeptic now will rise and question: "How do I know which of this conglomeration of treatment effected the boy's recovery?" My reply frankly is: "I do not know and I am not wasting my time trying to find out. I do know that everthing I gave him was indicated: echinacea for the depraved condition of his blood, the threatened pyemia; the asclepias, bryonia, and aconite mixture, to reduce the temperature, slow the pulse, tone the heart, and relieve the stitch-like pain in the side; the libradol also is pain-relieving and greatly soothes these sufferers; the pneumonia-phylacogen, in my mind, increases the phagocytic action of the white blood-cells and in a large measure assists nature in overcoming the great toxemia. So, neither do we know the whys and wherefores of the action of echinacea, yet, we do know that we get wonderful results in blood-poison cases. Let me add that I believe that the protein content of many of our plant-drugs has much to do with their efficacy.

While doing special work in a hospital in Chicago last spring, I saw a girl of 12 years of age brought into the operating-room and a member of one of the leading Chicago medical societies resect a rib under ether-anesthesia. I said, "Doctor, why ether?" He replied that her heart was weak. I asked if the irritating properties of the ether upon her lungs at this stage were not more harmful. He did not know for sure. Anyway, the little patient died

in a few hours, and I believe the ether contributed to her death.

I wish to report a case that was handled in direct contrast to my way of treating, because I was called (by 'phone) first to this case, but, was too tired to go, requesting the people to let me sleep two or three hours, when I should come; in the meantime they could send in and get something for the pain in his chest. However, they would not wait and telephoned for one of our nearest doctors. And here is his treatment:

He told them to place the patient's chest in ice—of which there was plenty last January. He called a few hours later, took the patient to the hospital, resected three ribs in his left side. Now, mind you, this patient had been sick with acute lobar pneumonia only six hours, yet, the only thing this doctor could think of was, to pack this boy's chest in ice and resect three ribs. Well, the poor boy died—what else *could* he do? I asked why they drained his side so early, and the Doctor told me that his lung had consolidated and that the most modern treatment was, to open up early and drain before the patient had a chance to absorb pus. Most modern—h . . .!! I got mad all over when I saw such ignorance practiced.

Here is another bad case of pneumonia that I may mention, that of a baby 9 months old. When I saw this child it was unconscious, with a pulse of 170, a temperature of 104.5 degrees F., and a respiration of between 50 or 60. This case was handled very much like the one above reported. The child remained unconscious for four days. Owing to its age and condition, I was unable to give any medicine by mouth, so, gave hypodermics exclusively, these consisting of echinacea and pneumonia-phylacogen. Pneumo-phthysine was applied to the child's chest, and this assisted materially in reducing the temperature. The nurse was dismissed on the ninth day, the child being cured.

I never have had a case of pneumonia in which it was necessary to drain the side, providing the treatment was started early. The only drainage-cases are those that are seen by me as a last chance and others in which home treatment was tried before calling the physician. I had the audacity one time to report at a medical

meeting my treatment and its result, and the secretary of the society claimed that the reason why I had no deaths was, because I had no pneumonia to treat. Well, my cases are verified by laboratory reports, just the same as these "drug-knockers" verify theirs at autopsy.

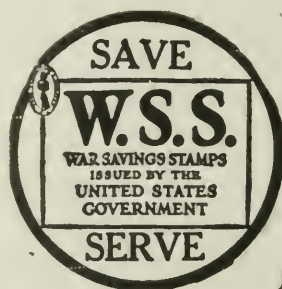
J. R. B.

Kansas.

NO MORE PHYSICIANS TO BE COMMISSIONED IN THE MEDICAL CORPS

We have just been informed, almost on the point of going to press, that at ten o'clock on the morning of November 11, the War Department discontinued the commissioning of physicians in the Medical Corps.

This condition, in all probability, is permanent and no further consideration will be given applicants for a commission in the Medical Corps until further notice.



RESERVE OF THE PUBLIC-HEALTH SERVICE

From *Public Health Reports* for Nov. 1, we excerpt the following:

For some time, it has been felt that the United States Public-Health Service should have at its disposal a permanent reserve, upon which it could draw in time of emergency such as that presented by the present epidemic of influenza. Moreover, it seemed desirable to provide for the commissioning, as reserve officers in the Public Health Service, of men whose work through experience gained in other fields would be of great service to the Federal health authorities.

With the numerous demands made on the Public Health Service during the pres-

ent epidemic, attention was again called to a joint resolution (S. J. Res. 63) pending in Congress since June, 1917. In the form reproduced below, this resolution was agreed to by the House of Representatives on October 18 and by the Senate on October 21. It was formally approved by the President on October 27, 1918, and will supply the needs of the service.

By far the larger part of the reserve to be organized under this act will be on active duty only during times of national emergency, though it will probably be necessary to establish periodic terms of training, so as to better fit the officers for such service. With the passing of the emergency these men will automatically go on the inactive list; always, however, subject to call to active duty by the Surgeon General. Detailed plans for the organization, training, and assignment of the reserve officers are now under consideration. The text of the resolution is as follows:

"Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, that, for the purpose of securing a reserve for duty in the Public Health Service in time of national emergency, there shall be organized, under the direction of the Secretary of the Treasury, under such rules and regulations as the President shall prescribe, a reserve of the Public Health Service. The President alone shall be authorized to appoint and commission as officers in the said reserve such citizens as, upon examination prescribed by the President, shall be found physically, mentally, and morally qualified to hold such commissions, and said commissions shall be in force for a period of five years, unless sooner terminated in the discretion of the President; but, commission in said reserve shall not exempt the holder from military or naval service:

"Provided, that the officers commissioned under this act, none of whom shall have rank above that of Assistant Surgeon-General, shall be distributed in the several grades in the same proportion as now obtains among the commissioned medical officers of the United States Public Health Service, and shall at all times be subjected to call to active duty by the Surgeon-General; and when on such active duty shall receive the same pay and allowances as are now provided by law and regulation for the commissioned medical officers in the said

regular commissioned Medical Corps. (Approved Oct. 27, 1918.)"

OUR SERVICE FLAG

By Frank A. Mitchell

(In *Chicago Commerce*, August 1, 1918.)

I

Our boys have gone, and we saw them go
With a laugh and a cheery smile;
And we sped them away, so they would not know
Of the tears shed after awhile.
But, the pain of parting is easier, far,
Because of the pride and joy
That the flag of service holds a star,
And the service of right a boy.

II

It's a symbol of love, and waves today
From the East to the Golden West,
The flag of our boys that have gone away
To welcome the warrior's test.
Theirs is the glory of love of right,
Ours of the love of them—
Together we'll join in the stubborn fight
And the victor's bright diadem.

III

To the fields of Flanders and old Lorraine,
They have gone with courage true,
And, until they return to their own again,
There's work for us all to do.
The honor of fighting a righteous cause
Is the guerdon they'll win out there,
The duty of serving without applause
Is the burden for us to share.

DOCTOR WAUGH AS A THERAPEUTIST

That portion of our medical fraternity who eschew surgery entirely and confine their practice to medicine alone may be divided into doctors and physicians.

It is much to be lamented that many medical men have so confined their efforts to the field of pathology and diagnosis as almost entirely to have ignored the study of therapeutics. I class the latter as the doctor in distinction from the man who adds to these acquirements a thorough knowledge of therapeutics and whom I class as the physician. The former knows the patient's disease and condition, is ignorant, though, of any means of affording relief, and, in fact, from a practical point of view, is of no more value to the patient than is the good, old auntie living in the back streets.

The physician knows and he believes in the wonderful virtues of drugs and is of life-saving value to his patient. The pro-

fession has entirely too many "higher critics," who in a high degree resemble the "higher critic" in theology—now, fortunately, becoming obsolete. These men, with a sweep of the arm, would brush aside all the tenets of theology and all the well-established knowledge of therapeutics. With an air of assumed intellectual and professional superiority, they presume to say that the great men of our profession of all ages were not able to arrive at correct conclusions and that it remained for their own colossal intellectual development really to arrive at the correct conclusion. The truth is, it is all a cheap and easy assumption of superiority. Such men, without exception, are ignorant of therapeutics, and not, as they would have you believe, such masters of the subject as to have discovered its uselessness, when, in fact, they are in an alarming degree ignorant regarding it. It is time that the profession express its impatience and disgust with these men, who block the wheels of medical progress and who are simply a dead-weight to those who are honest workers.

To many, all this may appear foreign to the subject under consideration; but, to those who had an intimate acquaintance with our esteemed fellow physician Dr. William Francis Waugh, it will be known that these statements are in entire accord with the opinions of our departed colleague. It was my privilege and pleasure to have had him, for half a lifetime, as a friend.

His birth-place was in Laurence County, Pennsylvania. His ancestors leaned toward the legal profession and for years were famous judges. However, our friend forsook the law, to become a most useful and widely known teacher and practitioner of medicine.

To an eminent degree, he possessed the qualities of observation and of judgment without which no man is able to detect the symptoms of his patient and from these symptoms to arrive at a correct conclusion as to the diagnosis. To these qualities, were added persistent industry and an inherent love of his chosen profession. With these qualities of mind, together with kindness of heart and a jovial and genial social affability far above the average, it was inevitable that he should arrive at the enviable position which for years he occupied.

As a therapist, I know no one that was his superior. His ability to apply medi-

cines to the relief of the sick was scarcely equaled. He had a confidence in medicine equaled only by his knowledge of its efficacy, and he carried this confidence into his writings with such a ring of assurance as to convince his readers of his accuracy. For years, he was authority to the therapeutic students of medicine, and, through his books, will continue to be so. He was a prince among men and among doctors.

It is with sorrow and regret that we bid goodby and treasure his memory as one of the assets of the years to come.

Let me close by quoting the little verse written by that famous emancipator, John Brown, and which is chisled, by his son, upon the modest gravestone:

Through all the dreary night of death,
In peaceful slumber may you rest,
And when eternal day shall dawn
And shades and death are past and gone,
Oh! may you then, in glad surprise,
In God's own image wake and rise."

V. E. LAWRENCE.

Ottawa, Kans.

REGARDING THE LUMINAL-TREATMENT OF MORPHINE-ADDICTION

In the August number of *CLINICAL MEDICINE* (page 619) Dr. George D. Swaine delivers himself of a whole-hearted arraignment of all who lay any claim for luminal as a remedy in morphine-addiction. Since last March, I have visited the Dr. H. E. Goetz's Sanitarium at Knoxville, Tenn., and have had personal experience and observation of the effect of his remedy for the diseased condition of the mind, at least, of a morphine-addict. It is needless for me to say, I hope that I am cured—yes, cured. I am a man in my fifty-ninth year; if I am not cured there is no cure. Have had no morphine in two months (was taking 20 grains a day), am eating and sleeping regularly,—practicing again. There is morphine, heroine and codeine in my laboratory where I could get it if I wanted it. As I am one of the most enthusiastic supporters of the treatment, I am anxious that no one might be misled by Doctor Swaine's criticisms. Hence this letter.

I have gone through the mill several times, six in all; have tried all the remedies claimed to have any virtue whatever, except the Towns-Lambert treatment

which I did not have the nerve to "hit", and I thank God I did not. Hyoscine leaves the mind of the patient in a weak condition, feeble, child-like, with will-power gone. Restore the mind to a normal condition, then, one who desires to be cured will not go back to morphine.

Luminal is the only remedy that cures [the only?—Ed.]; it keeps the patient asleep quietly without delirium, for 7 or 8 days. If it is intelligently administered he can be awakened regularly and given nourishment, but, he goes right back to sleep again, in quiet, peaceful repose. When he comes out from under its influence, the nervousness is gone; he feels as though having been asleep only for a few hours: There is no craving for his old drug. The patient is weak, of course, but soon goes to eating and sleeping and regains his strength rapidly and is well. Is this not a remedy?

Doctor Swaine claims to have accomplished many cures, making it appear as a very easy or simple matter to effect them. This is by no means in accordance with fact, though. Let me say right here, all honor to any honest physician who has made, and is making, diligent efforts to cure this disease, or condition, as you please to call it.

Doctor Swaine has cured nearly three thousand cases in the last 20 years. That means upon an average of about 70 cures to each state in the union. I have been pretty closely identified with the different medical associations for the last 10 or 15 years, yet, never before the August number of CLINICAL MEDICINE did I hear the name of Dr. George D. Swaine or of his sanitarium. But, that makes no difference, Doctor Swaine, if you are doing such good work, keep right at it all the time.

But, what does he do it with? While I agree with him in some of his points, especially in regard to what class of patients will be and will not be cured, it is not at all evident what is his remedy. Doctor Goetz comes squarely to the front and indicates the one upon which he relies. Let's see if we can find Doctor Swaine's remedy. He tells us to prove it. "A supply of bilein and podophyllin tablets, magnesium sulphate, seidlitz powders, saline laxative and Hinkle's pills. Keep on hand duboisine, eserine, strychnine, sparteine, strophanthin, glonoine, lobeline, emetine hydrochloride, pilocarpine, sulphonaphtholene and,

last and least, veronal." "Supplied with this lot of ammunition you are prepared for the conquest and the cure of your patient."

Very simple. Yet, I would hate to be the patient if the morphine is withdrawn and these remedies are depended on to give relief. The first named are all right to keep the bowels open. But, of the last ones named, duboisine and veronal are the only ones that have any hypnotic effect whatever. Now, some of these remedies are mere adjuncts to the treatment. But, again I ask where is the remedy—the sheet anchor to control the awful, terrible nervousness following the withdrawal of the morphine?

You can take the drug away from an addict taking 60 grains a day, and reduce it down to 1 and 1-2 grains in 24 hours without the slightest inconvenience. Why? Because the 60 grains of the previous day are still having their effect and sustaining him. Wait 24 to 36 hours longer without increasing the dose, and see where your patient will be: Uncontrollable pain and nervousness are sure to follow. The gradual-withdrawal plan will not do, as all know who have experienced it.

So, we have examined this entire article and have not found the author's remedy. Study each individual patient (for, there are no two exactly alike), age, temperament, debility or feebleness considered; and, if you believe that he really wants to be cured, treat him with luminal as a base, some patients requiring more of this remedy than others. Intelligently administered, nourished and nursed correctly, by an experienced nurse, your patient soon will be off the morphine and well.

Such was my experience and observation, with a minimum amount of suffering, at Doctor Goetz's Sanitarium.

J. L. B.

———, Ga.

EXTERMINATE THE RATS

Playing the part of the Pied Piper in a National campaign for the extermination of rats and mice, the Department of Food Production and Home Economics, of the Woman's Committee, Council of National Defense, is cooperating with the plans inaugurated by the Biological Survey of the United States Department of Agriculture in its effort to combat the national

indifference on a subject that bears an intimate relation to the general field of conservation. This indifference, says the executive chairmen of the Food Production and Home Economics Department, is well illustrated by a farmer in the District of Columbia, who, although he confessed that he lost \$300 worth of grain yearly because of these pests, was unwilling to spend the \$250 necessary to make his precincts "rat proof."

"Rat Proofing" campaigns have been carried on successfully in certain places in Europe, notably in Denmark, and have been tried out in this country. That they are urgently needed, is manifest by the fact that \$200,000,000 worth of food stuffs are destroyed yearly by rats and mice.

The campaign in the states will be under the direction of the Director of Extension of the College of Agriculture, to whom the state and local organizations of the Woman's Committee are being asked to pledge their heartiest cooperation.

NEW FACES FOR OLD

Just behind the far-flung battle-lines in France—stretching far rearward to Brittany and southward to the sunny south, American Red Cross hospitals and convalescent homes dot the French landscape. They shift daily, sometimes in an hour, as the swing of war sends the Allies forward toward the Rhine. Base hospitals in and about Paris accommodate more than 7,000 patients. Evacuation- and front-line hospitals can care for all the thousands the god of war may throw in to them. Dispensaries, diet-kitchens, and infirmaries run by the Red Cross are located all over France. It is part of the Red Cross service for humanity. Convalescent-houses are located at Biarritz, Cannes, Beycheville, Saint-Cloud, Morgat, Le Croisie, Issoudun, and Chateau-Cirrey.

But, humanitarian as all this is, there is another phase of Red-Cross work, fully as interesting and, in a way, more vital to the future. The man who loses a leg or an arm or even his sight may go about in comparative happiness and content. But, the man whose lower jaw is shot away—whose face is so disfigured that his fellow beings turn away in horror tinged with pity—that is the man for whom the Red Cross, aided by a noble women, is doing the best

work of all. It is literally a case of new faces for old.

Supreme art, mechanical genius, and twenty dollars supplied by the American people and spent by the Red Cross furnishes the new face. It sounds simple—and it is, yes, its consequences are wonderful beyond words—which only those who have seen the mutilated before and after wearing these masks can understand.

To begin at the beginning, an English sculptor, Captain Derwent Wood, conceived the idea of replacing nonexistent tissue and missing parts with masks, these to resemble the victim of war as he appeared before being thus mutilated. The work was perfected by Mrs. Maynard Ladd, another sculptor, who is devoting all her time in Paris to refacing these "mutilés," as the French call them.

The method is simple also. When the mutilé has been nursed back to health and his wounds are thoroughly healed and the tissues and muscles have finished contracting, he goes to Mrs. Ladd's studio, who then takes a plaster cast of the mutilated features. Then, she takes a photograph of her subject as he appeared before mutilation. From this, she shapes a mask to fit the mutilated face, taken in replica in plaster. Then, a very thin mask of copper plated with silver is made. If eyebrows are missing, they are inserted in the mask; if a mustache adorned the original face, a mustache is added. Sometimes the eyelids have been destroyed, artificial eyes, with openings in them, for the pupils of the wearer, are made. Every conceivable mutilation of the face has thus been successfully managed.

When the mask is complete, the mutilé goes for a fitting. The mask is held in place by "fake eyeglasses," by a wig—in a manner not easily discernible. After the mask is fitted, the artist comes into action. Mrs. Ladd paints the masks the exact color of the mutilé's face. The illusion is perfect. The man, no longer a mutilé, can smoke and talk. He is a human being again—he no longer fears to walk the streets. People no longer gaze upon him in pity, scarcely disguising horror and aversion. The transformation is complete—at a cost of twenty dollars and the art and devotion of a woman!

The Red Cross has much other work to do in the service of humanity. By the end

of this year, it will have spent more than \$71,000,000 in France and \$20,000,000 in Italy. To continue this work for humanity—this service for all peoples in all climes—the Red Cross must have the united support of the American people. With this end in view, it will hold the second annual Christmas Roll-Call during the week of December 16 to 23, when it is hoped that last year's record of 22,000,000 adults and 8,000,000 children who appended their signatures to the nation-wide pledge to sustain the flag will be broken.

NATIONAL LICENSING OF PHYSICIANS

Agreeable to your request (October issue, page 728) for expressions of opinion from those "in civil practice as well as in the service of the Army," as touching upon the question of the legal right of physicians who serve in the Medical Reserve Corps of the U. S. Army to practice in any state without going through the formality of a state board examination, I venture my humble address for the good of all, as follows:

Any physician graduated from any acknowledged school of any American state, should be accorded the right to practice anywhere the Stars and Stripes floats!

For, as your correspondent in the October number says, "If we are good enough to care for the boys here and overseas, we ought to be competent to practice anywhere in the world." This, it seems to me, ought to be self-evident, especially as touching those who are now serving, or who have at any previous time served, their country as members of the Medical Reserve Corps. But, the "stickle", or legal hindrance, to such a reasonable and desirable arrangement seems to be a matter of jurisprudence pivoting upon that decadent doctrine of "states rights," which should be set aside to give place to the doctrine announced by one of America's greatest constitutional jurists who declared that "anything is constitutional which is for the right, in America; and no amount of sophistry or hair-splitting argument can prevail against it!"

The accredited practitioners, themselves, in this country, are, in my opinion, to blame for this state of affairs more than the people or the law-making bodies of the several states; for, they have been more

jealous of building up a name and a lucrative practice for themselves, in their several communities, or states, under state laws to "protect" them, than they have to appear and be known as the "friend of humanity" everywhere.

The "sure-enough" physician is truly "a friend of man," no matter what sun shines upon him; and he will be a true patriot when his country has need of him, either in camp or on the bloody field, at home or overseas, as has often been demonstrated by thousands of the medical profession. If he is "good enough" thus to serve his country and his fellowman in times of war, both at home and abroad, there should be no geographical line of demarcation, at any time, to circumscribe or limit his sphere of practice; but, on the contrary, he should be allowed and welcomed to pursue his vocation under any sun, especially where floats the emblem of his own country. The very fact that he has passed the examinations of any one of our medical colleges and has been admitted to practice in any state of this Union, should label and entitle him as competent and worthy to practice anywhere. Otherwise we have the anomaly, the foolish paradox, of one part of a supposedly united country sitting in judgment upon and contradicting the qualified action of another part concerning a subject which interests and affects the good of all.

I speak from personal experience, since I graduated from an Ohio college in my youth and settled to practice, in my early career, in Pennsylvania, where I have since continuously remained, excepting the time I was in the service of my country, in camp, as a member of the State Militia Medical Corps, and, during the Spanish-American war, as a member of Uncle Sam's Medical Corps.

I am, therefore, a believer in, and an advocate of, the idea that anyone who has passed a college course in medicine (at any reputable school) and has been admitted to practice in any state, should be registered at governmental headquarters as eligible and competent to practice in any state or territory of the United States, especially if that one has served his country in army or navy, at any time, either in peace or war; and I believe that the medical fraternity, in all states, should move concertedly for the enactment of a federal

law to that effect. It would greatly enhance our standing and enlarge our fields of usefulness.

JAS. B. STEWART.

Bradford, Pa.

The Call of Humanity



is "Join the Red Cross"

FOR A STRONGER AMERICA

Given a good healthy body, comes next in order a wholesome mind; and play conduces to both of these desirable conditions. However, play does more than develop agility, muscular control, and physical ease. Properly organized and supervised, it should have an educational value of the highest kind. Did you ever see a kitten play with a ball or with its mother's tail? There is play of an elemental sort. It yields to the kitten the joy that play must, of course, give. It also trains the muscles how to respond. However, this joyful playing does even more. It teaches the kitten its future business of life; how to catch a mouse. And, whatever unkind things may be said of the cat today, no one ever accused it of inefficiency in its trade, profession or business, whichever it may be, that of mouse-catching.

The next generation of American men are to show an improved efficiency, that is, if the plans of the Children's Bureau carry through as the Women's Committee of the Council of National Defense is endeavoring to carry them through. The weighing and measuring of babies was the first item on the year's program. Now comes the second, to teach those children how to play. "An efficient child is the beginning for an efficient citizen" would constitute a good slogan for the "patriotic week."

That program will include singing, pageants, games, but, as important as anything, will be the physical tests of efficiency as developed and presented to young Americans by the National Playground Association. These tests take their name from the fact that everyone passing them under the regulations can procure from the Playground Association a bronze medal bearing in relief the figure of a hurdler,

which says to all beholders, "I have passed the standard test." During the recreation drive, certificates will be issued to all successful contestants. These either may take the place of badges or entitle the holder to purchase a badge, if he prefers.

This is a standard group of tests which every efficient boy and girl in American is supposed to pass. It is the work of a committee of experts who wanted something that would help children to physical efficiency, through play and the instinct to succeed. The "events" are not new. Doubtless, there hardly is a live, alert boy that has not tried them. But, it is desired now to mark these live, alert boys by some insigne of honor that may urge the more sluggish to emulation. To be able to chin himself four times, jump five feet nine inches in a standing broad jump, run sixty yards in eight and three-fifths seconds; this brings to every boy the right to wear the beautiful bronze medal issued by the National Playground Association.

Girls must be able to run a potato-race in forty-two seconds or an all-up Indian club-race in thirty seconds, throw a ball into its goal, from fifteen feet away, twice out of six trials, and walk twenty-four feet, balancing themselves, with a book laid upon their heads, on the narrow edge of a sized two-by-four scantling, before they are entitled to the first medal.

After the first medals have been won, ambitious young people may go on practicing "stunts" that will enable them to win the second and third medal. Of course, the tests are increasingly difficult. For instance, to win the third, the boy candidate must be able to run two hundred and twenty yards in twenty-eight seconds, and girl candidates must throw a basket-ball from a distance of forty-two feet.

To raise the standard of physical efficiency among the boys and girls of America, means, to give them greater freedom, beauty, and power. This is one object of the badge-test. As our young people are today, so will America be tomorrow. Consequently, the ultimate object is for a stronger America.

A CRANIOPAGUS MONSTROSITY

On June 23, I was called to see Mrs. R. I found her with a temperature of 105 degrees. She told me that she was within eight days of her confinement, according

to her count. The next day, her temperature was 103 degrees at 4 p. m. and everything pointed to typhoid fever. Her tongue was red, she was very nervous, her complexion was dark and the face pinched. I put her on an emulsion of echinacea, a dose every three hours. I told the family that I should not call on the 27th, unless something more than just the fever-condition were to turn up. About 4 o'clock on June 27, I was called to see her, being told that the patient was having "some pains in her stomach."

Upon my arrival, I found the woman in labor, and I remained for several hours. The labor-pains were very slow. I informed the family that the baby or babies were dead, I believing that there were twins. After several hours' waiting, finding dilatation sufficient, I ruptured the amniotic sac. The amount of fluid escaping was enormous. Then, after some time, I tried to use the forceps.

The head was well placed, so, I thought there would be no trouble in delivering the child; however, I worked until completely worn out. It was impossible to get a firm hold of the head with the forceps. Finally I told the family that this was not a one-man job, and called in aid Dr. F. O. Taylor. When he came, though, he could not do any better than I could. Eventually, we decided to perform podalic version. I inserted my hand and arm up to my elbow and grasped one foot, when Doctor Taylor could manipulate on the outside while I indicated how I was coming around with the foot. After securing one foot and leg, I turned the case over to Doctor Taylor, for, I was completely exhausted. After many fruitless efforts by both of us, we decided to take a hold of the leg that we had out and pull on it until we could move it some way. Exerting our utmost strength, we finally pulled the body out to the head, and there the body stopped. We worked with instruments and our hands for some time.

When we got the head to pass, we found what had been the cause of our trouble. There were two girl babies, as complete babies as you ever saw, but, only one head, and this head had two faces. The bodies, from the head down, were as perfect as those of any normal baby. The faces, Janus-like, were turned in opposite direction. I am sending you the best photo-

graph that I could secure; while not good, you can see the face of one and the back of the head of the other one. The two babies weighed 14 1-4 pounds. The mother is about 28 years old and weighs about 120



Dr. Parker's Case.

pounds. Within three days after the birth of the babies, notwithstanding the severity of the ordeal, the mother's temperature went down and she made as fine a recovery as she did in her five previous confinements. In Edgar's work, fifth revised edition, page 417, is a picture of a similar monstrosity, this one, though, differing in that the face is turned.

JOSEPH J. PARKER.

Winfield, Tex.

AN UNORTHODOX TREATMENT OF GONORRHEA

Today, I am going to tell of some of my experiments and experiences in the care and treatment of that old and well-known malady—gonorrhea.

After many years' trial with all the old and many of the new remedies, I finally worked out this idea: The gonococcus loves an acid medium. Why not neutralize

that medium? So, instead of oils and injections and all the rest, I use sodium bicarbonate and, with it, tincture of nux vomica. As a germicide, potassium sulphate.

When a patient comes to me, he often says: "I have had this trouble for months—or years—or weeks—or days. Those with older cases tell of suffering and disgust and expense and, withal, of despair of ever getting well.

But, why recapitulate? You doctors know the story as well as you know your alphabet. I simply say, you are dealing with what is known as one of the most stubborn of diseases. It often is masked by treatment. Sometimes a man becomes immune to his own infection, and, yet, is a dangerous person, for, his urine shows the diplococci of Neisser, and, hence, is capable of infecting a woman; for, the disease so long dormant in him becomes active at the embrace; or, if she be his wife, she sooner or later will have infected fallopian tubes, become an invalid, have to go to the hospital to have the tubes removed, become sterile. Gonorrhea is largely responsible for there being only one child in the many families: the first birth is normal, but, pus-tubes subsequently blot out the woman's ability to become a mother.

This is not the hand of Providence, it is the wild-oats crop sown by the young man in his salad-days. He is the criminal and his wife, the dearest object in life to him, pays for his sinning.

The first thing I say to one coming to me for treatment is this: "The treatment costs you ten dollars a week, always in advance. It will take six weeks or longer. You must do as I prescribe, or I will have nothing to do with you. When I think the time has arrived, we shall have laboratory-tests made, for which you are to pay. Then, when I pronounce you well, you can rest assured that you are cured. Your name will not appear, but, you are to know that the laboratory, and not I, pronounce your freedom from infection. You are to wear a suspensory bandage. You are to live frugally. Take a tablespoonful of epsom salt every other day, before breakfast, in half a glass of water. Absolutely avoid sexual intercourse, also all intoxicants. Bathe the whole body often. Faithfully take the medicines ordered by me,

and report to me twice a week for further advice."

This is the medicine:

Tincture of nux vomica.....	10 drops
Sodium bicarbonate.....	20 grains
Label: One tablespoonful in a glass of Water	8 ounces

water before and after each meal, three times a day.

Also this:

Kali sul. 3x.....	25 tablets
Water	4 ounces

Label: One tablespoonful between meals.

Presumably the reader will say, "This is all nonsense," but, let him try this patiently and see what comes of it.

I do not write prescriptions, so, the patient does not know what he is taking. For the convenience of many, I put the medicine in half-pint whisky-bottles, without label of any kind. One bottle will have an ordinary cork, the other, a glass stopper, so that they can be easily distinguished. As many here are transients, boarding or rooming, they are closely watched by landlords and owners of rooming-houses. An unmarked whisky-bottle excites no suspicion.

In case there is orchitis, which is really epididymitis, I prescribe the following:

Mother-tincture of pulsatilla (which I find best).....	10 drops
Water	4 ounces

Label: One tablespoonful every hour.

In the place of the old bran-bag poultice, which is nasty and not often easy to prepare, I have the heat applied by means of a hot water-bottle, partly full and wrapped in a towel. This gives comfort and excites no suspicion.

To some of my readers, the term kali sul. 3x may be an unknown term and pulsatilla an unknown drug. You may consider me a pariah, because I call your attention to some things outside of the regular pathway of medicine as we old-school physicians know it.

There is a book known as "Schuessler's Twelve Tissue Remedies", in which it is endeavored to show that the human body has twelve dominant, or controlling, elements, which, when in proper equilibrium, constitute health; the lack of any one or all of these constituting disease. These salts are all inorganic. They must be given in fine dilution, in order that the cells of the human body may assimilate

them. The philosophy of this therapy is interesting, to say the least, and for more than a quarter of a century I have made careful bedside tests with it and found the most wonderful results following the administration of the absurdly small doses recommended by Schuessler.

While the book is published by the Luytes Pharmacal Company, of St. Louis, (a homeopathic house), Schuessler, in his book, says that he is not a Homeopath. Neither is his method of treatment homeopathic. While we are on the subject: doctor, it will broaden you greatly to read homeopathic books, for, out of them, will come some revealing thoughts—and you will, really, now, not become contaminated by the lesson. We, as regular physicians, have a right to take any remedial measures that come to our hand. The patient, and not “pathy”, is the thought that should be in our mind. Health and its continuance is the object of our ministry. Whatever assists in this, is proper treatment.

Three summers ago, a fine-looking, tastefully garbed gentleman called upon me in much distress, physical and mental, and with tears in his eyes and voice told me that his lovely wife was away on her vacation and he had fallen in at the restaurant with a young widow, and that a gonorrhea was the woman's contribution to him. This man had a fine-paying position, and he was a scholar and a gentleman. His wife was of a fine family. This simply meant divorce, and worse than death to himself. I quieted the man down, and we began treatment. His attack was a bad one.

I had tests made from smears, just to please him; I knew he had it. I kept him on treatment. I told him it would vary, that at times he would be worse, especially if he caught a cold; then there would be times when the discharge would disappear. And so it proved. Sometimes he would come in bright and smiling, declaring he was well, the next time, he despaired of ever getting well. In the fall, his wife wrote that she was coming home. I suggested that he tell her to delay; but, he said he had written that he had rented a house and was going to move next week. I said, to tell her that he had decided not to take that house. So, I kept him two weeks longer before having tests made, and then we found no gonococci. “Now”, said I,

“let her come. I have been fighting for her. It is now safe for her to return.”

I saw that man a few weeks ago. He tells me that they both are well, that no gonorrhea has manifested itself in either of them.

C. S. COPE.

Detroit, Mich.

PROPHYLACTIC VACCINATION AGAINST SPANISH INFLUENZA

For about three weeks, I have been using, for the prevention of Spanish influenza, as well as in its treatment, the micrococcus catarrhalis combined bacterin. I was led to use this bacterin by the fact that it seems to contain the organisms which are known to be present in almost every patient suffering from the disease, namely, the pneumococcus (the different types), the streptococcus both hemolyticus and viridans, and the micrococcus catarrhalis, as well as the bacillus of Friedlander and staphylococci. As attending physician at two institutions, I have had an opportunity to try this vaccine as a prophylactic on a rather large scale and to test its efficacy.

At Lawrence Hall, an Episcopal home for boys, from 10 to 12 had been coming down with influenza every day for two days. From 15 to 20 of the boys had been sent home from school on Friday. These were inoculated Saturday morning, and of this number 10 had temperatures of 102 to 103 degrees, but, by Sunday, following the reaction, the temperature in all cases dropped to 99° F. or thereabout. I inoculated the rest of the boys in the institution the same evening, and there have been no new cases. There are about 135 boys living at Lawrence Hall.

My experience at the Bohemian Old People's Home and Orphan Asylum was similar. Here, also, there had been from 10 to 12 inmates coming down every day. On one day, 17 children were sent home from school for coughing, and these I inoculated within an hour after reaching home. About 8 or 9 out of the number showed an elevated temperature the following day, but, all were improved within forty-eight hours. I then inoculated all the children in the Home (more than 130), and no new cases have developed since, so

that the outbreak practically was stamped out in forty-eight hours.

I have also used the catarrhalis combined bacterin in my private practice for several weeks and have found that it usually prevents the disease, modifies its severity when it has developed, and prevents the complicating pneumonia, which so frequently causes death. I also give this bacterin, with benefit, in the case of children, even two or three days after they have come down with the disease, but, in adults, after the pneumonia has set in and congestion is complete, it does not prove so successful. However, I have treated, with much benefit, several cases of influenza in which pneumonia had developed. One woman had had influenza for a week, when the temperature suddenly shot up to 104.5 degrees. After two doses of the catarrhalis combined bacterin, the temperature went down to normal.

If the first dose is given within twenty-four hours after the first symptoms appear, the temperature usually will begin to recede and fall to normal.

Children are benefited by the bacterin late in the disease, even after the disease has run for several days.

In adults, if the patients are still showing a temperature twenty-four hours after the first dose, I repeat it. The temperature will go up, but, after this second dose, it usually will return to normal within a day or two. If there is a reaction following the first inoculation, I give no more. If the temperature goes up and does not come down, I give another dose in twelve to sixteen hours. I never have given over two or three doses in the treatment of a case. I saw a case on Sunday—a man who had been sick for a week; temperature, 100 to 101 degrees, gave him a dose. The temperature went to 105° F. on Monday. It probably will be down today (Tuesday).

You can use the vaccine at any stage during the influenza, if there is no pneumonia; you can use it at any time during the influenzal stage, even after a week, but after consolidation occurs, you can not expect it to accomplish much.

I have now used the catarrhalis combined bacterin in more than 600 cases, either as a prophylactic or in the course of treatment. Only one patient receiving this treatment died. This patient (a woman) improved greatly, her temperature dropping to normal, but, she died in collapse from

acute heart weakness when apparently convalescing. I have lost 2 other patients.

CLAYTON ALDER.

Chicago, Ill.

'WARE OF THAT NEW "FLU"!

The *Chicago Daily News* for November 19 contained the following item which we reprint as being of interest to our readers:

Chicago is warned to take precautions against a new epidemic of influenza. While the wave has about disappeared in the city, surrounding towns are experiencing outbreaks even more virulent than was the case a few weeks ago.

Hammond, Gary and other northern Indiana towns are experiencing new outbreaks and the Lake county public health authorities are showing considerable alarm. Lake Forest, too, reports a fresh outbreak, the disease appearing in Ferry Hall, a girls' fashionable boarding school, and one of the pupils has died.

Such outbreaks, however, are not classified by health officials as a part of the new epidemic, but show the disease had not been thoroughly stamped out. The warning they are issuing to-day is of a fresh epidemic that is now sweeping through France and other European countries, and which they declare will reach this country in a matter of time, just as the disease reached Boston from Europe a few weeks after its outbreak abroad.

The Journal of the American Medical Association, in its issue of Saturday, reprints the following taken from bulletins issued by the government for circulation among the American medical officers in France:

"During the last two months a second severe influenza infection has swept over France and has spread to all countries of Europe in about equal force. The second phase, which has not yet reached its maximum, has been characterized by a much higher percentage of initially severe cases and particularly of pulmonary complications.

"In the United States the onset of the [first] epidemic was, as is usually the case with pandemics of influenza, about three weeks later than in London or Paris."

Dr. W. A. Evans and Dr. John Dill Robertson, commissioner of health, agree that it is only a matter of time before the new epidemic reaches Chicago. Both urge

the public to prepare by vaccination to meet the new scourge.

"There is no question that we will be hit by a new epidemic," declared Dr. Evans. "It is just a question of how long it will take to cross the ocean and reach us, as was the case of the past wave."

[This wave of "flu" that is now going over Europe and is certain to reach the United States soon, of course is merely a part of the same epidemic that we have been experiencing for the last few weeks. Already it has visited this country, finding additional victims among those who no longer indulge in the outdoor life of summer and autumn that has kept many people well.

Personally, we are convinced of the very considerable degree of protection afforded by immunization against influenza diseases by means of the Rosenow vaccine. At the same time, it will be well to practice additional precautions in the way of disinfection of nasal passages and throat by means of antiseptic sprays, all of which is to be supplemented by careful attention to personal hygiene and by a regular and moderate mode of living.—ED.]

THE VOLUNTEER MEDICAL-SERVICE CORPS AND THE INFLUENZA EPIDEMIC

In view of the present serious epidemic that is sweeping over the country, the Volunteer Medical-Service Corps of the Council of National Defense requests us to invite earnest attention to the following precautions in which the families under the care of physicians should be instructed.

In order to secure individual protection against influenza-infection, and, indeed, against other infections, as well, thorough cleanliness of houses, premises, clothing, utensils, and the body should be practiced.

Since the infection probably is carried by the dust, one should avoid stirring that up. Better it is to prevent dust—in the streets, by means of crude oil, in the houses, by the use of vacuum-cleaners and of moist dustcloths. Thorough cleanliness, plenty of soap and water, are splendid protectives against disease.

For personal prophylaxis, nose and throat should be sprayed and gargled frequently with alkaline and antiseptic fluids,

Physicians, and others, are urged to cooperate to the fullest extent with the local state and national boards of health. Towns and cities should be prepared for emergencies by establishing emergency hospitals in suitable buildings, by districting communities and apportioning and grouping medical forces comprising men and women and physicians and nurses arranged in such a manner that no portion of any community may be left without adequate medical care.

The United States Public-Health Service and various local health-authorities have published circulars containing warnings and directions regarding "Spanish" influenza, and these should be circulated as widely as possible and also explained to the public wherever this may be necessary. It is to be said that these circulars are written in popular language; still, in many localities, detailed explanations may be required.

Now, more than ever, the importance of fresh, clean air should be insisted upon, as also the avoidance of chilling as well as of excessive heat, excessive meaning anything over seventy degrees Fahrenheit in living-rooms.

Physicians, in fighting the epidemic, are cautioned, against administering medicines and other forms of treatment that may depress the vital forces, especially the heart. Everything should be done to promote the patient's resistance and nutrition.

The Volunteer Medical-Service Corps reminds us that, as the army and navy have been fighting and conquering Germany and, as their presence still is required in Europe, we at home must fight and conquer disease without depriving the army and navy of any necessary resources. The medical service of the government should not be asked for medical and surgical supplies, the home supply being utilized, instead, to the fullest possible extent.

Physicians are further warned, during the continuation of the epidemic, not to undertake surgical operations except when absolutely necessary to save life.

Altogether, not only members of the Volunteer Medical-Service Corps, but, all physicians are urged to cooperate fully with the United States Public-Health Service, as well as with the state and municipal health-authorities.

In the World War

THE MAKING OF AN ARMY-SURGEON

Life at a Base Hospital in France

I had been flattering myself that I was making good progress, in my assignments, in getting toward the front. So, when I was ordered to report at a base hospital, I was disappointed—not, for any dislike for base-hospital work, but, that it meant that I was to go back 150 miles instead of forward to the fireworks. In the Service, however, one soon learns to go where he is ordered, so, to the base hospital I went, reporting there with the least-possible delay.

Upon arriving at my new station, I found that what was now a hospital had been, before the war, a school for boys. On either side of the old stone building, were frame buildings for extra wards, nurse's and officer's quarters, supply-office, and store-rooms.

After reporting to the Commanding Officer with a copy of my orders and being introduced to the other officers who happened to be about, I was assigned to a general medical ward and started to work. At that time, our hospital had a larger percentage of medical than surgical cases. It being in the winter months, we had plenty of contagion cases and accidents to care for.

A hospital of this kind might be called an internal-medicine man's paradise. By this, I mean that here we have a wealth of material, a variety of cases, the assistance of a good nursing force of American Red Cross nurses, laboratories, x-ray, postmortems, and nearly everything that characterizes a first-class hospital. Besides all these things, there was to consider the youth and vigor of the patients, which, from a medical standpoint, was a big factor in gaining favorable results.

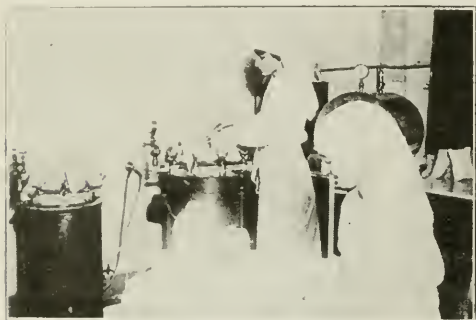
Here, I was destined to spend more than six months' service. These months were filled with incidents interesting, educational, pleasant, and some that were not so

pleasant; but, from the standpoint of a man that is fond of new happenings, as I must admit I am, they were all interesting.

Our prescribed routine began by arising a little before 7 o'clock, breakfast at 7:30, visit wards during 8 to 11, attend officer's meeting at 11:45, have noon luncheon at 12, then, usually, relief from duty till about 4 in the afternoon. Then, visiting wards again from 4 to 5:30 p. m., dinner at 6 p. m., then off duty for the rest of the day. However, sandwiched in between this apparently easy program, there were many calls on our time that kept us on the move all day long. At 9:30 a. m. there were the necropsies, to which we would proceed from our wards in order to check up the *ante mortem* findings with the *post mortem* findings. At our officer's meetings, we asked for information on the proper making-out of forms and reports mentioned, and on improvements that we could discover from time to time. After luncheon some one of the M. O.'s would, probably, relate some interesting or puzzling case of which he would like to have our opinion; or, an hour might be spent in the x-ray room puzzling over some mysterious shadow on a plate taken of one of our patients, for, we have many "chest-cases" during the winter. We would profit thereby by the Roentgenologist's interpretation of the many shadows that at first seemed just a mass of blurs. Or, we might make a visit to the laboratory, to follow up a blood, sputum, serum, urine or feces analysis.

Once a week, we had a medical meeting of the entire hospital staff. Here, we discussed our cases. For each meeting, one of the staff was chosen to give us a talk on his particular line of cases, for the succeeding meeting. Our Commanding Officer gave us talks on gas-warfare, regimental medical work, malaria from the army standpoint, its prevalence and treatment, British medical customs, his experiences at the battle of Cambrai; the Chief of the surgical staff talked an hour on empyema. The

Chief of the medical service gave us talks on contagion and general medicine. Our Roentgenologist gave us an hour's talk on x-ray work, "illustrated" by a great many plates of our own patients. New conditions that arose in the course of the war were discussed as they came up. Members of our staff that had been sent from time to time to different cities, for the purpose of instruction, went over this information with us at the meeting following their return. Visiting medical officers would often address us for an hour on some new phase of an old condition. These meetings



A Sterilizing Room.

were the source of a great deal of interest and certainly were educational. In this way, we were kept strictly up to date and to the strongest kind of harmony and co-operation between the different departments.

Sometimes we would have to sit in at a Court Martial, either as a member or as the Counsel for the Defense. For, soldiers will occasionally slip and break one of the Articles of War, and then, for the sake of correction and discipline, they must be taken to task.

These were but a few of the calls upon our time that helped to make our work both interesting and fascinating.

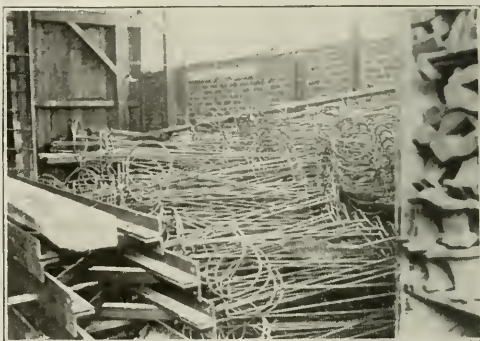
There was plenty of diversion, also, for, all work and no play would not be a good program, either. The Y. M. C. A. and the Red Cross both had huts on the hospital grounds, where nearly every night there were moving pictures, concerts or lectures. These lectures were by some of our prominent men from the States. They dealt with many different subjects, from the ancient history of this particular part of France to conditions existing in the world today, including Prussianism, Russia, and

the latter's troubles. The medical officers of the hospital gave dances for the nurses, weekly or bimonthly, in their hut. Line Officers and Naval Officers attended these dances, and the Khaki and Navy Blue made a good blend of colors on a ballroom floor.

On a Sunday afternoon, a walk out into the country afforded us a chance to see the native villagers in their Sunday best. It seems to be a custom for the people of this district to spend their Sunday afternoons walking along the country roads, for, we would pass groups of them dressed, as I have said, in their Sunday best clothes, quaint old starched bonnets, wooden shoes, and all. They were mostly of the peasant class, of rosy complexions and open countenances, passing us with the ever present "*bon jour, messieurs.*"

Wood has been scarce for centuries in this part of the world, it seems to me. Practically all of the buildings were built of stone or cement, with tile roofs. I have seen very few frame buildings since I have come to this country, other than those that have been built by our Government. To look at these houses, their white walls and red tile roofs, little gardens around them and the bright sun shining down, it was hard to get one's self to believe that but a few hundred miles away men were bleeding and dying in order that this peace might persist and these old people be spared their homes.

One Sunday, I had the rare luxury of



A Paris Splint Workshop.

an automobile ride to a neighboring small city of the fourteenth- or fifteenth-century type. Here, we saw another of those old chateaus, or castles, with its ivy and moss-grown walls, while on three sides of it were the remains of an old moat. Just within



At the American Red-Cross Laboratory in Paris. Assembling Burlingame Units (emergency sets), to be sent to the Front.

the walls that surround the city on all four sides, nestled the town proper. The streets were very narrow and the houses and stores were crowded closely together, as though space had been at a premium when they were built. We bought some souvenirs, postals, and some French-briar pipes. Before starting for home, we ate a meal at the best hotel there, and we were agreeably surprised to find that the chef had at one time worked at some of our good hotels in the States. He tried to outdo himself in the preparation of the meal and succeeded so well that at the finish, when he expressed a liking for American cigarettes, we gave him all that we had with us.

Our enlisted men at the hospital formed a base-ball team, and, as the weather improved, they challenged teams from other organizations near us. Some times we would play on our home grounds and some times we would go to the grounds of the other teams. In this way, we officers who went along to help root had a healthful and enjoyable afternoon's sport and had a chance to see some of the other camps—once to an infantry camp, once to a naval-air station, once to another base hospital, and so on. Several pleasant evenings were

spent by some of us as guests of the Transport Medical Officers, sometimes on their ships, and sometimes at someone of the cafés in that city. We, in turn, invited them at times to share our mess at the hospital. In this way, we managed to keep in touch with the happenings back home. There is an old saying that "nothing broadens a man so much as traveling"; but, it is the people that one had a chance to meet that have to do with the broadening.

Some days we had afternoon concerts by the regimental bands of the troops camped near us. These were primarily for the benefit of the patients, of course. The band would arrive about 2 o'clock at the park in front of the hospital and play for about two hours. Many a weary heart they comforted by their patriotic airs, the strains to infuse new life into the patients and to lend an air of romanticism to the old walls of the hospital. One night, we were invited to the barracks of one of the French regiments nearby, where a French Major of Chasseurs lectured to us for nearly an hour and a half, to explain to us how to tell the rank and branch of service of the French soldiers and officers by their uniform and markings. The French uni-

form and markings are very elaborate and are not nearly as easy to understand as are ours.

Organization applies to almost everything in a military hospital. For instance, we had our fire-department. Certain of the medical or sanitary-corps officers were detailed to the different stations within and without the hospital, and their details of enlisted men were appointed, for instruction under them. Fire-call was sounded on the bugle, at different times, for drill purposes. On the sounding of the call, the ward-sur-



American Red-Cross Dispensary, Paris.

geons were to repair at once to their respective wards, the patients in that ward were to remain there each by or on their beds till the drill was over. Hand chemical extinguishers were in every ward, while in a shed adjoining the hospital there was a larger chemical fire-extinguisher with hose attachment, that could readily be run out to the scene of the fire. Preparedness surely applies to fire protection, and I was very glad to see drills of this kind. The time to prepare for a fire is before it happens, and I admire the foresight that can see that far ahead and be organized, so that when the time comes and a fire does happen there will be no panic or loss of life resulting.

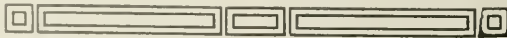
Inspection of the enlisted men of the medical department, with their equipment, was held every Saturday afternoon. Six of the officers were detailed to stand in-

spection with them; one Medical Officer acting as Commanding Officer for the Detachment, one as the Inspecting Officer and four as Junior Officers. This was good training for us, as we all aspire to be Commanding Officer some day.

General Pershing honored us by inspecting us on one of his visits to this base. All calls for the daily routine were by bugle, from the sharp, clarion-like first call and reveille, by which we were awakened, to the sweetest and saddest of all calls, taps, or lights out, which was the last call of the day.

In the spring, the American Expeditionary Forces and the French Government joined hands in the food conservation plan, one outcome of which was the forming of garden-clubs. At our Post, a Medical Officer was appointed as Garden-Officer. He was instructed to see to the planting of any and all available land around the hospital. Between the outlying wards and buildings, were small strips of ground, small but fertile. These strips were planted with vegetables, seed being furnished by the Government. So that we over here are doing what we are asking you over there to do—conserve food, by using less and producing more. At our hospital, we went the garden proposition one better. Out of some old lumber that we had for the salvaging, neat little houses were built, and we started to raise our own rabbits and poultry, with a halfway promise that at some future date we might have a sanitary pigpen and raise our own pork. The waste from the tables of several thousand patients could be used to good advantage in this way. We also raised our own guinea-pigs for the laboratory. Knowing the enormous task that our Government has to do, not only to transport millions of troops over here, but, also, to transport equipment and food for them, every little that we can do in the raising of meat is just that much less to be brought over.

(To be continued.)



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

Origin, Development and Use of the English Language

If we endeavor to trace the origin of the great mediums of thought that from imperfect beginnings have grown with the course of civilization and intellectual advancement until they finally crystallized in definite languages, we shall find ourselves confronted at every step with the doubts and obscurities which attend the birth and early history of all human achievements that have marked the world's progress. Especially is this so when we attempt to solve the problem of earlier tongues, the very vestiges of which either have long since disappeared or remain only in fragmentary forms the interpretation of which, notwithstanding the earnest investigations of profound scholars and critics, seems likely to remain to us forever a sealed book whose records no ingenuity or research of man can reveal.

To speak, then, of any language as derived from fixed and intelligible sources, implies a perfect acquaintance with the character and history of the people or peoples with whom it originated. But, it is precisely here that our knowledge is most at fault; since all annals of mankind prior to the rise and fruition of Egyptian civilization are wrapt in almost profound obscurity, amid which we can catch only here and there a gleam of uncertain light—too faint to guide us in our anxious search. This may be said to hold respecting the simplest tongues of which we have any satisfactory idea. How much more so, then, regarding a language so varied and complex as the subject of our present study—the English!

In the vast and important family of which our mother tongue, together with its cognate idioms, forms a distinguished branch, we may trace with something approaching certainty a connection with families of previous growth and decadence. The

Latin element, for an example, may be followed back through Roman and Greek and, finally, to the pre-Sanscrit language—written vehicles of thought with which linguists have long since become familiar; these presenting, in themselves, no great difficulty to the student and affording a rich field of investigation from which we derive new stimulus to labor. Here, however, with the great Sanscrit and a few preceding fragments deciphered from the cuneiform inscriptions of Babylon and Nineveh, we enter upon a region of doubt, the confines of which are unstable and well-nigh bewildering. We have reached a civilization whose history has perished with itself, and into the gloom of this—the prehistoric period, as it is called—the researches of modern thought in vain would penetrate. Let us determine, therefore, such elements of the English language as do not baffle inquiry, leaving its remote origin enveloped in its insolvable mystery.

The earliest authentic record of the inhabitants of Great Britain points to a rude and barbarous people, dwelling somewhat like savage hordes, among whom little trace of future development is discernible. They formed parts of the Celtic race, which appear to have spread over a large portion of western Europe, and which were known in the different regions of the continent as Celts, Gauls, and Cimbrians.

The earliest account of the ancient Britons begins with the conquest of England under Julius Caesar, . . . Strong in the spirit of conquest and powerful in the supremacy of a splendid empire, the Romans had gradually extended their dominion over a greater part of the then known world. It needed but the energy and sagacity of their renowned chieftain to lead them yet further, into the land which their own poet described as "cut off from the whole world." Notwithstanding the most obstinate and severe resistance

against the invaders, the ancient Britons were impotent to withstand the skilled armies that confronted them, and during the first century of the Christian era unwillingly submitted to the yoke. It must not, however, be understood that the Roman domination extended over what is now known as the United Kingdom of Great Britain, viz., England, Scotland, Wales, Ireland. The occupation under Caesar was limited to the central and southern portion of England proper. The Celts inhabiting the remaining portions of the island—including the mountainous country, Wales and the highlands of Scotland—retreated into their strongholds and made successful resistance against the Roman arms. Ireland remained secure from invasion, chiefly from its geographical position and the determined character of its brave and hardy population.

During a period of about four hundred and eighty years—which brings us to the close of the fifth century of our era—the Latin conquerors maintained their sway. Such of the native inhabitants as were subjugated by them gradually acquired their customs, learned their language, and peacefully submitted to their rule. It was but natural that the arts and culture of Italy should have influenced in no small degree the advancement of British civilization even at this early period. Traces of ancient masonry remain to this day in England, to attest the intellectual superiority of the conquerors. Lines of fortification, towers, and military highways still are to be discerned, and we may easily conceive that during this interesting epoch in the history of Great Britain the germs of future magnificence were sown. Yet, the impulse that was to awaken a new era in the advancement of native power was not destined to be derived from the more enlightened possessors of the soil.

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To a people hitherto almost unknown, save as ocean-marauders, England owes in great part her ultimate liberation from foreign tyranny. Throughout the long course of Roman occupation, the usurpers had been subjected to frequent attacks and invasions on the part of those islanders who from the first had resisted usurpation. From the mountain retreats, whither they could be pursued only with the greatest difficulty, bands of sturdy warriors from time to time swept down upon the scattered

legions of Rome, carrying with them devastation and dismay. A more serious difficulty, too, at length pressed upon the invaders when the inroads of the northern barbarians threatened the integrity of the Roman empire itself. Everything combined to hasten the recall of troops to defend the safety of Italy and preserve undimmed the honor of a country which every Roman regarded as a proud and sacred heritage. In this extremity, England was abandoned, and then it was that the Saxon pirates, who had been called as allies by the Highlanders—the warlike and indomitable Picts and Scots—took possession of the land. These Saxons came from various points along the German Ocean and Baltic Sea—chiefly from Schleswig and Holstein and adjoining shores.

Endued with remarkable courage and sagacity, these Saxon hordes—finding the island more fertile than their barren home lands—at once stamped upon their new habitation the impress of their skill and power. Sprung from a mighty branch of the human race, these new invaders were not slow in availing themselves of every resource vouchsafed by their sudden and complete ascendancy. And it is from them and their immediate influence in England, and later in Scotland and Ireland, that there may be later the first important epoch in the formation of the language the literature of which we are about to consider.

From rude ballads and war songs sung around ancient hearthstones and thrilling with the glorious deeds they commemorated, there was gradually developed a simple, yet, mighty tongue, which today constitutes a large part of the vocabulary of our English language (more than 25,000 Anglo-Saxon words). Nearly all our words expressive of varied emotions; those which are designed to convey the simplest ideas and those which relate both to animate and inanimate nature have their origin in the Teutonic tongue implanted by the Saxon adventurers. (The remaining portion may be said to have come down to us from a multiplicity of sources—principally, as we shall see, from the Latin, not, however, through the Roman dominion, but, through the Norman-French referred to later.) From rude beginnings, the language of the Saxons attained, in the course of a few centuries, a more highly cultured and elaborate form. Chronicles of the period, interspersed with legal and eccles-

istical disputations, served to strengthen and perfect the new tongue; and the history of former achievements, contained in the ancient war songs, or sagas of the seakings, lent to the language a vigor and simplicity, a force of diction and a certain grandeur of expression that still characterize the idiom and have given it a power unlike that of all other modern tongues.

For upward of five centuries, the language continued to develop, notwithstanding continuous scenes of disorder and bloodshed from internecine strife and colonization of the barbarous Danes, who sought to wield over the Saxons the same sway the latter had established over the aboriginal Celts. At length, there came a day when even the powerful followers of the good King Alfred were destined to yield to an invasion, the significance of which, in the ultimate modification of our language, we hardly can overestimate—I allude to the occupation of England under William the Conqueror toward the close of the eleventh century.

A more brilliant passage in history than the Norman conquest scarcely can be found. Filled with the romantic spirit of the age, skilled in a language whose delicacy and variety of expression could hardly be surpassed, and maintaining a court whose brilliancy rivaled the princely splendors of the middle ages, William and his followers found a rapid and easy way to the sovereignty, not only of the island, but, of the harsher manners and customs, and the still weaker elements which they encountered. Scornful of the native tongue, ecclesiastics and scholars vied with each other in diffusing the stately, refined dialect of Normandy throughout the kingdom. In the courts and schools and wherever in the land the system of feudal vassalage was established, Norman-French became the spoken and written language.

The natural result of this was, a powerful influx of Latin words, through the French—an idiom derived mainly from Latin sources. True, the Roman invasion had grafted upon the original Celtic tongue a limited vocabulary of Latin words, remnants of which still are to be traced in such prefixes, terminations, and words as *Stratford* (*strata*, street); *Chester* (*castra*, camp); *Lincoln* (*colonia*, colony) and *Portsmouth* (*portres*, port); yet, their number is insufficient to permit us to regard

contact with *Latin* as the chief origin of the Roman element in our language.

The real derivation of this all-important feature of English is to be referred to the Norman conquest. As an illustration of the beauty and grace with which Anglo-Saxon became adorned, we may mention Chaucer, whose "Canterbury Tales" form the most striking example of refined, sensitive thought, combined with great terseness of expression, and mark the golden age of Old English literature. Spenser referred to him as "Dan (i. e. dominus, don or master) Chaucer, well of English undefiled." Yet, some critics maintain that his real merit, so far as language is concerned, lay in his skilful mingling of Norman-French with Anglo-Saxon or Old English, and that thus he is entitled to the honor of originating a new literature.

Is it not a little singular that, considering its strength and forcible though wide expression, the Celtic dialect should have almost wholly disappeared from our language, scarcely one hundred words in present use being traceable to its influence?

We have, then, in the formation of the English tongue an original basis of Celtic, gradually modified by the Roman invasion, this later almost obliterated by the occupation and sway of the Saxon adventurers, and then, finally, strengthened and perfected under the long reign of the Normans. From the later epoch, a change has slowly ensued; still, generally speaking, the language has undergone no modification comparable with those which marked its earlier growth.

It will thus be seen that ours is, in no respect a simple tongue. Indeed, it may, rather, be regarded as a combination of the most heterogeneous elements, each of which has played an important part in its formation and character. Unlike other modern languages, English is trammelled by no fixed canons of taste, but, keeps pace with the full interpretation of the marvelous that distinguishes the age in which we live. The immense impetus given to scientific inquiry has necessitated new forms of speech and a new phraseology adapted to our constantly advancing method of thought and the full interpretation of the marvelous discoveries that, like morning light upon the earth, are breathing upon the mind of man. From every available source, we draw

whatsoever is required to lend power and versatility to a language that is gradually becoming a universal medium of intercourse. Simple in structure, flexible in all that demands nicety of expression, grand and sonorous in diction, and in its earnestness and force of utterance rivaling the finest languages of Europe, our stately and graceful idiom may well command the respect of others and veneration by ourselves.

Amid the struggles and bloodshed that accompanied the establishment of power in England, this English language took deep and lasting root. Its parentage is associated with the pomp and splendor of things; its later growth embodies the aspirations of a people battling for freedom; and now, in this twentieth century, we behold it, if not in its perfection, still occupying an exalted rank among the tongues of earth. With a vocabulary sufficiently varied for the purposes of intellectual growth—numbering upward of 120,000 words—a principle in itself that guarantees even and constant development and a literature equal to, if not surpassing, that of all other languages, it is quite within the bounds of possibility that it may attain a supremacy in the world of speech and letters equal to that it now exercises in the domain of commerce. There no longer is hardship in travel around the world, unless one attempt it without money or the English language. The latter has now become the first foreign language to be learned by the millions of

Japan, China, Malaya, India, and Egypt, and ranks either first or second in all others, with a constant tendency to become first. Both Volapuk and Esperanto were devised too late to enjoy a ghost of a chance against this tongue—already pervasive wherever the merchant with his wares or the missionary with his culture penetrate.

We should come, therefore, to a study of the best English authors with ardent, yet, liberal minds, conscious of the law of freedom that has molded their thought and style; with no preoccupation other than a sincere desire to know and understand one of the grandest triumphs of human progress and of mental culture, upon which the welfare and happiness of mankind so largely depend; for, we must remember that language not merely is the vehicle of thought, designed to facilitate intercourse among the nations of the earth, but, that all emotions of which the mind of man is susceptible, all manifestations of human will, and the higher, holier intuitions of the soul are but the fountain hidden in the rock, the pupa in the crystal, until they have been vivified and called into living reality by the power of thought moving among and transforming them through the mystic touchstone of language.

So much for retrospect. Now permit me a brief contribution to our own present efficiency in the use of this priceless heritage.

(To be continued.)

Vision

I f isn't raining rain to me,
It's raining daffodils;
In every dimpled drop I see
Wild flowers on distant hills.

The clouds of gray engulf the day
And overwhelm the town;
It isn't raining rain to me—
It's raining roses down.

It isn't raining rain to me,
But fields of clover bloom,
Where any buccaneering bee
May find a bed and room.

A health unto the happy,
A fig for him who frets;
It isn't raining rain to me,
It's raining violets.
—Robert Loveman.

Among the Books

CROFTON: "IMMUNIZATION" CROFTON: "TUBERCULOSIS"

Pulmonary Tuberculosis, Its Diagnosis, Prevention, and Treatment. By W. M. Crofton, M. D. With Colored Frontispiece and 20 Illustrations. Philadelphia: P. Blakiston's Son and Co. 1917. Price \$1.50.

Therapeutic Immunization: Theory and Practice. By W. M. Crofton, M. D. Philadelphia: P. Blakiston's Son and Co. 1918. Price \$2.50.

The author of these two volumes, who is lecturer in special pathology at University College, Dublin, has done much original work during the last few years in an endeavor to develop a satisfactory method for immunization against tuberculosis. One of the difficulties confronting him, as also the experience of other workers in this field was, the unsatisfactory nature of the antigens presented by the available tuberculin preparations on the market. Doctor Crofton, therefore, elaborated a tuberculin preparation of his own which, like the American-made vaccine introduced by Dr. Karl von Ruck, in 1912, is believed to contain all reactive constituents of the tubercle bacillus including the fatty substances, and, therefore, to be capable of stimulating the production of a complete antituberculous immunity.

Doctor Crofton lays stress upon the importance of protective antituberculous immunization, and the only way in which this can be brought about is, in his opinion, by stimulating the production of specific antibodies or of a mechanism facile in the production of these antibodies in the individual by inoculating him with the toxin or vaccine of the particular microbe against which an immunity is to be created ("Tuberculosis," p. 66). "In the case of a universal infection like tuberculosis it is the one measure that will protect when the constitutional resistance is lowered by the various environmental and inherited causes of low resistance."

So much is the author convinced of the justice of his postulate that, according to

him, (*ibid.* p. 68) "while everyone ought to be inoculated against this disease so as to make sure that his resistance is at least normal, since everyone is certain to put up a fight against it some time or other; there can be no question as to the necessity of inoculating members of families in which tuberculosis has occurred, since their resistance usually is subnormal and they have peculiar facilities for contracting the disease."

As regards the treatment of clinical tuberculosis of the lungs, the author rightly points out that this never is an uncomplicated tuberculosis, the infection always being associated by that with other, pus-producing, microorganisms. Consequently, as far as the specific treatment of pulmonary tuberculosis is concerned, Doctor Crofton is of the opinion that first of all the associated infection or infections should be controlled, if necessary by the administration of appropriate vaccines which best are autogenous. During that time, he proposes to hold the tuberculous process itself in check by the administration of iodine as an intravital germicide. For this purpose, he employs preferably iodoform by the intravenous route. Doctor Crofton reasons for, and methods of, administering iodoform in this manner are very interesting and appeal to the Reviewer as well taken. In due time, of course, the treatment of the tuberculosis infection itself by specific means will receive proper attention, and, here, Doctor Crofton's complete antigen seems to present a very acceptable remedy.

The second volume mentioned is devoted to the problems of therapeutic immunization in general and discusses the theories, explaining the mechanism of immunity in acceptable manner. Occasionally however, the author forgets that, what is perfectly clear and self-evident to him, owing to continued study of and familiarity with the subject, is not as well known to the general practitioner for whom both books are intended. Occasionally, the author's evident desire to be brief and to condense the

text as much as possible has led him to sacrifice clearness to brevity. The Reviewer is under the impression that some of the discussions might have been elucidated a little more. However, with a reasonable preliminary training, the student will have no difficulty in following the author's very interesting discussions and, certainly, he is bound to benefit greatly from the study of these two books.

It is interesting to note, by the way, that the insistence upon the importance of protective immunization against tuberculosis originated in our own country and that it is now supported in Ireland. We well remember that the idea was rather ridiculed in this country by the "leaders" of medical thought. As usual, however, the "leaders" are constrained to follow and the justice of prophylactic immunization, not only against tuberculosis, but, by implication, against other infections, is now generally accepted.

BONIME: "TUBERCULIN AND VACCINE"

Tuberculin and Vaccine in Tubercular Affections. A practical Guide for the Utilization of the Immune Response in General Practice. By Ellis Bonime, M. D. Troy, New York: The Southworth Company, Publishers. 1917. Price \$5.00.

Here is another book on tuberculin which gives evidence of the increasing attention that is being devoted to the so-called specific treatment of tuberculosis. Doctor Bonime has elaborated a method of "safe" tuberculin treatment which, while by no means original, still is very acceptable. The method of gradual immunization by carefully spaced doses has been followed by several other physicians long before Doctor Bonime. Yet, that it has found acceptance and support in a large institution like the New York Policlinic School and Hospital is cause for encouragement.

It is to be regretted that, in his choice of tuberculins, the author of this book is extremely limited, and especially that he refrains from crediting other American workers who certainly have done much to advance the specific treatment of tuberculosis. The practical part of the book contains valuable information and guidance for the physician who desires to devote much attention to the treatment of tuber-

culosis. Doctor Bonime's book merits careful study and increasing popularity.

"PRACTICAL MEDICINE SERIES"

Volume IV of the current series of *Practical Medicine Series* is devoted to the literature on pediatrics and on orthopedic surgery, an important portion of the discussions being on diseases of the newborn, infant feeding, infant welfare, etc., all subjects that are important factors in the present-day endeavors to lower the infantile mortality. Other chapters are devoted to poliomyelitis, both from the medical and the orthopedic viewpoint; to the infectious diseases of children, malaria, respiratory diseases, heart diseases, and so on.

Practical Medicine Series is a publication issued in eight volumes a year and containing abstracts of the literature during the preceding year. The subject is divided in volumes, making it convenient to select those topics in which physicians or specialists may be particularly interested. While the volumes can be bought singly (the price for the present one being \$1.40), the subscription price for the series of eight volumes is \$10.00. It is published by The Year Book Publishers, 304 S. Dearborn St., Chicago.

CRAIG. "WASSERMANN TEST"

The Wassermann Test. By Charles F. Craig, A. M. (Hon.), M. D. (Yale). Illustrated with colored plates, halftone plates and fifty-seven tables. St. Louis: C. V. Mosby Company. 1918. Price \$3.00.

A treatise on the Wasserman Test always is interesting, for the reason that, with our constantly enlarging experience with this important serum reaction, our appreciation of its possibilities, as well as its limitations, becomes more and more exact. Having been prepared by a medical officer of the United States Army and published with the authority of the Surgeon General, it may be accepted as self-evident that the methods described are those recognized as most suitable for correct work.

It is significant that the author cautions against drawing conclusions from the results of the Wassermann test alone. Indeed, he insists that the interpretation of these results must rest very largely with the clinician, for, the clinical picture present often is more decisive than is the re-

sult of the test, and it is the clinician's place to reconcile the result of the test with the clinical picture, rather than it is the serologist's duty.

We believe that this position is well taken since we are convinced that much harm has been done in the past by laying undue stress upon results of serological investigations and without proper appreciation of the clinical picture presented. It is only by considering duly every possible factor that enters into the diagnostic data that a true conclusion can be arrived at.

FRENKEL: "TABETIC ATAXIA"

The Treatment of Tabetic Ataxia by Means of Systematic Exercise. By Dr. H. S. Frenkel. Second revised and enlarged English edition by L. Freyberger, J. P., M. D. (Vienna). With 130 illustrations. Philadelphia: P. Blakiston's Son & Co. 1917. Price \$3.00.

While the treatment of locomotor ataxia by systematic and graduated exercises does not claim to influence the tabetic process itself, it is asserted to have a beneficial effect on the most prominent symptom of dorsal tabes, namely, the ataxia. It is to popularize Doctor Frenkel's method that this little book has been made accessible to English-speaking physicians.

LEWIS. "GRAY'S ANATOMY"

Anatomy of the Human Body. By Henry Gray, F. R. S. Twentieth Edition. Thoroughly revised and re-edited by Warren H. Lewis, B. S., M. D. Illustrated with 1247 engravings. Philadelphia and New York: Lea & Febiger. 1918. Price \$6.50.

A new edition of Gray's Anatomy always arouses our interest, although this is largely retrospective and the retrospect recedes into the past farther and farther as the years go by.

It can hardly be expected of the Reviewer to undertake a detailed comparison of this latest edition of "Gray" with earlier ones. Suffice it to say that it has the same familiar appearance, although the illustrations seem to be more easily read than formerly because of the distinctive

use of red, blue and yellow colors. We are under the impression that these colors have been utilized in several past editions, but, we confess not to have "looked up" Gray for some time. To the young medics just entering upon their studies, the announcement of the twentieth edition of Gray's Anatomy will be of interest.

SLUDER: "HEADACHES AND EYE DISORDERS"

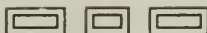
Concerning Some Headaches and Eye Disorders of Nasal Origin. By Greenfield Sluder, M. D. With 115 illustrations. St. Louis: C. V. Mosby Company. 1918. Price \$7.00.

Secondary symptoms that are due to pathologic conditions in the nasal passages very often are overlooked, for the reason that the clinical picture many times does not suggest a nasal origin at all. Foremost among such afflictions are certain forms of headache and eye affections, which may be relieved promptly and permanently once the true etiology is understood. The author of the book before us deserves our thanks for collecting the material available on this particular subject and for presenting it in such a splendid manner.

SHERA: "VACCINES AND SERA"

Vaccines and Sera: Their Clinical Value in Military and Civilian Practice. By A. Geoffrey Shera, M. D. With an Introduction by Sir Clifford Allbutt, M. D. London: Oxford University Press. 1918. Price

Doctor Shera, the author of this little treatise, attempts to clear up the deplorable chaotic medical opinion concerning the subject of vaccines and sera. He properly deprecates undue optimism regarding this method of treatment, that is, of specific therapy, which, however, despite many failures and discouragements, without a doubt, is an important method of dealing with a great variety of diseases that physicians have to treat. The little volume contains an immense amount of information in a very small space and is well worth studying.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6407.—“As to Leukoderma.” E. M. W., British Honduras, asks: “What can I do in a baffling case of leukoderma or, rather, “vitiligo,” in which I have given by mouth and applied to the skin everything that I could think of, but, without avail?” At present, the ivory-white plaques appear only on the back of the subject's hands, but, they are increasing slowly all the time.” The Doctor has been thinking of injecting sodium cacodylate, and giving calcium iodide and mercury combined with nuclein by the mouth. The patient is a strong, hearty man of middle age.

We are not surprised, doctor, at your failure to effect a cure, since, unfortunately, treatment for this condition rarely is successful. In view of the fact, however, that occasionally the trouble may occur on the basis of a syphilis-infection your suggestion of administering sodium cacodylate may be a good one. This plan is further supported by the fact that occasionally the continued administration of arsenic has influenced the trouble favorably. Concerning the administration of sodium cacodylate, you will find suggestions in various textbooks.

Vitiligo has been asserted by some authors to be of nervous origin—in fact, to constitute a neurosis—while others have advanced the theory that it is due to abnormal functioning of the endocrine, or ductless, glands. For the former reason, bromides sometimes have been administered, while, in accordance with the latter view, thyroid, adrenal, and other endocrine preparations have been utilized.

To tell the truth, doctor, very little is known about the origin and nature of this

esthetically disagreeable, although otherwise harmless, condition.

We suggest that you see to it that this patient's general condition be in perfect order, including elimination through the bowels, kidneys and skin. If you can find anything abnormal in the vital organs, administer treatment toward its correction. Then sodium cacodylate might be administered tentatively, perhaps one dose a week for the space of a month.

If that course fails, it would seem a rational procedure to try some of the hormones, perhaps thyroid extract or, possibly, “hormotone.” Hormotone contains a combination of internal secretions and often has been found of very great service in conditions where these secretions were deficient.

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QUERY 6408.—“Pyelonephritis.” C. B. S., New York, writes: “The patient is a man 58 years old. Nine and one-half years ago, he severely bruised one testicle, which caused swelling and great pain. The condition was neglected and eventually the ascending pus caused a very bad case of cystitis. A year after the injury, at a hospital, he had irrigations of the bladder for six weeks, and for as long at his home. His physician again neglected him and he began taking hexamethylenamine. Then, after studying his own case, the patient happily blundered upon the idea of saturating himself with sulphide of calcium, and he did so occasionally, besides taking a methylene-blue compound. Then he learned to massage the prostate with a rectal electrode, expressing much pus and foul stuff. He has continued the hexamethylenamine all this time, taking from 10 to 20 grains

daily, but, neglected the massaging for the past two years, because of improved condition.

"Five months ago, his heart began to be quite irregular and he employed the old physician, who gave him tablets, which had no effect. Then he changed to tincture of digitalis, which whipped the heart, but, did little good. He then secured an analysis of his urine, and this revealed much albumin, besides granular and hyaline casts. Not satisfied, claiming that he had not suffered the usual symptoms of Bright's disease, a specialist at Rochester (principally of stomach diseases) was called into the case by the family physician, and he also found albumin, and hyaline and granular casts. Afterward he paid a personal visit to this physician alone and gave full history of his case, whereupon the physician expressed the opinion that all the difficulty might be caused by the pus still ascending and causing infection of the ureters and into the kidneys. However, he did not alter his findings, but recommended massaging again and the drinking of twelve to fourteen glass of water daily.

"Next, the patient went to a specialist in Buffalo and has had by him two analyses of the urine, with a test of kidney efficiency. This specialist could find no albumin and no casts, except a few tubular casts, and he diagnosed "subacute tubular nephritis." He scouted the condition of the testicle (which is now only a small soft tumor, performing no function perceptibly, as nothing can be expressed from the corresponding vesicle) and dismissed entirely the idea of infection from that cause, as being impossible of communication from the testicle to the bladder. I think he is wrong on this point.

"I have found the man's stomach much distended by his following the doctor's advice to drink so much water, besides being a very hearty eater. I reduced the water to two quarts, most of it to be taken hot and half of it at mealtimes; I also placed him on a restricted diet of milk, eggs, and zwieback, seasoned only by cayenne-pepper. I have taken away the digitalis and hexamethylenamine and allow no medicine but *cratægus* (15 drops four times a day). He is flushing the bowels every morning with salines. The heart is now acting quite satisfactorily, with very little skipping. There is no heart disease

at all; the prostate is in fine condition. The patient is about his work, looking and feeling much better.

"Resumption of massaging brings pus from the vesicles and shows that there is trouble there yet. No pus has been reported in any of the urinalyses. The man is married, but, does not indulge in intercourse, although he admits having had nocturnal emissions. One physician reported spermatozoa and pus in matter expressed from the prostate by the physician himself. I am making three massages of the vesicles and prostate each week and this reduces very much the aches and pains in the sacral region.

"From the two quarts of water and three glass of milk drank daily, he passes fully two quarts of urine. This shows the kidneys efficient; however, the urine is slightly below normal in specific gravity. There are many shreds and patches in the freshly voided urine, which makes me suspect that the old cystitis is not entirely cured. These shreds and patches seem to be on the increase. I am in doubt about making further irrigations or continuing the hexamethylenamine. That, of itself, continued over so long a term, might cause some of the blood pressure discerned, since the formaline compounds are derived from alcohol. The blood pressure, though, is much lower since the drugs mentioned are omitted.

"I have never met such a case nor read of one. I want to know your exact findings and all the information and help your talent can give me. Is it Bright's disease? If so, is it caused by the old injury and its neglect? This man's family history is clear; his own history and habits are excellent—of a Christian man. Tell me what is your opinion about this perplexing case?"

The report of our pathologist upon specimens of urine submitted clearly indicates the existence of pyelonephritis, the presence of pus casts being practically pathognomonic, and we are forced to conclude that the trauma sustained some years ago set up an epididymo-orchitis, and that this resulted first in cystitis and through the further ascending infection involved the kidneys. The question remains, of course, whether only one or both kidneys are implicated, which, however, can easily be settled by cystoscopic examination. There is a faint pos-

ibility, of course, that nephritis existed prior to the injury to the testicle, but that has little or no bearing upon the present condition.

Your treatment is excellent, still, it would seem distinctly desirable that a cystoscopic examination be made, subsequent treatment to be based largely upon the findings.

As you are aware, pyelonephritis usually is bilateral, when resulting from obstruction in the bladder, prostate or urethra, but, the kidneys are not, as a rule, equally involved. In the differentiation between pyelitis and pyelonephritis and cystitis, there are some interesting features.

In chronic cystitis, the amount of urine and urea passed daily is practically normal, unless the patient has been given water in large quantities or diuretics. The reaction generally is alkaline or soon becomes so, unless the cystitis be due to infection by the colon- or tubercle-bacillus. There is a mucopurulent sediment, which coagulates quickly; also, microscopically, pus and a large number of bladder epithelial cells are found. There is no renal pain and no tenderness on pressure over the kidney.

In pyelonephritis, the urine is turbid yellow, amber, or lemonade-colored and has a specific gravity of from 1.005 to 1.025, but, usually is below normal. The urea and chlorides are markedly diminished. Pus-cells and pus in masses are present, together with a few red blood-cells, epithelia from the pelvis and renal tubules, hyaline, granular, epithelial, and pus casts, the latter pathognomonic of pus-kidney.

In this case, the possibility of the existence of calculus may almost be excluded, nevertheless, excellent authorities state that every patient should be radiographed as a matter of routine and that a diagnosis can never be considered complete unless such examination has been made.

The mere fact that the prostate and seminal vesicles are in bad condition does not in any way detract from the serious aspect of the renal lesion. As a matter of fact, doctor, in the light of the urinary findings and the data that you have presented, we do not think there need be the slightest question as to diagnosis.

POINTED PARAGRAPHS

Lieutenant Ollie Josephine Baird, of Detroit, began her duties as contract surgeon at Camp McClellan July 1, and has the

rank, pay, and quarters of a first lieutenant. She has not yet been allowed to wear the insignia of her rank, but the regulation salute has been accorded her. Lieutenant Baird was one of the first five graduates from the Mayo clinic and formerly practiced medicine at Detroit.

Some 250 telephone-girls have been chosen to go to France as a signal-corps unit. In addition to conforming to the qualifications set by the U. S. Signal-Corps for membership, the operators were required to pass a psychological examination, to determine their motives for wanting to go abroad. They will be stationed in groups of 10 in American bases of supplies and points of embarkation and will not be nearer than 23 miles to the front.

The doctor that stays at home and takes advantage of the business of his colleagues may live on the avenue and be a director in a bank, while the man who goes may, after the war, live on a side street and be fortunate if he deposits a few dollars in the bank; but, it is the latter man that will be honored and who will leave to his children an inheritance worth having.—(Lieut.-Col. Victor C. Vaughan, in *Jour. Tenn. State Med. Asso.*, June, 1918.)

The women of England are unwearying and indefatigable in their toil. By their labor, nine-tenths of the shells manufactured are made. Everywhere, as the men go forth, the women silently take up their work. The business of the British and French is, to hold the Hun armies until the United States can intervene with crushing force, and the women of both nations are doing their part.—(From Elisabeth Robinson Scovil, in *Amer. Jour. Nursing*, July, 1918.)

Twenty uniforms for women in war-work are now officially recognized in the United States. The women wearing these uniforms are munition-workers, telephone- and radio-operators, yeomen, employees of the Shipping Board and the Food Administration, Red-Cross workers, and the Young Women's Christian Association workers abroad, Women's Motor-Corps of New York, Girl Scouts, and students in the National Service School of the Woman's Naval Service, Washington, D. C.



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